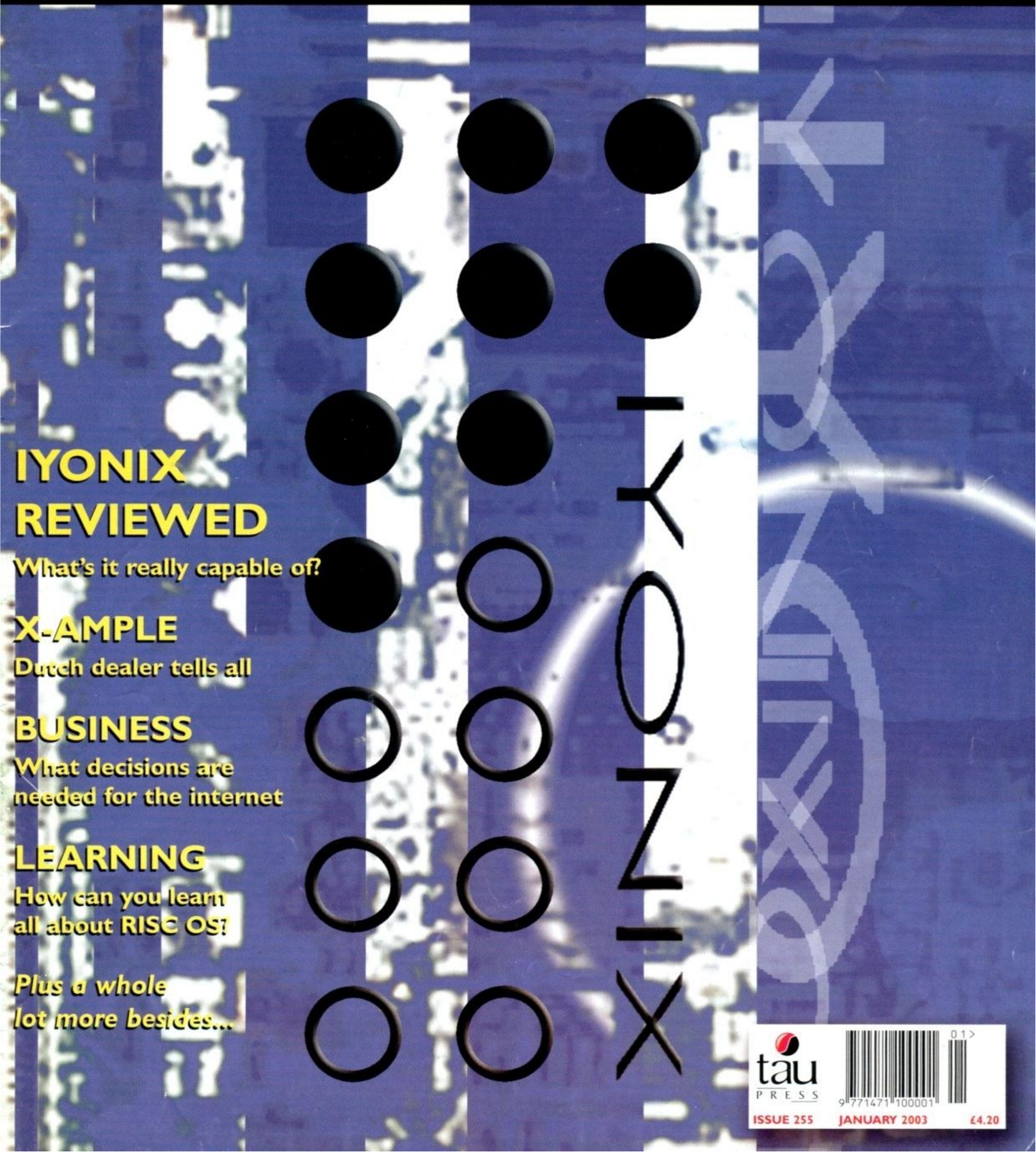
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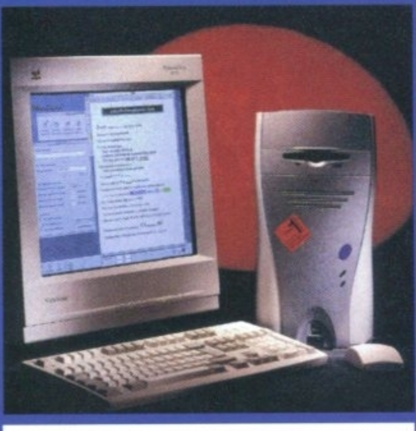
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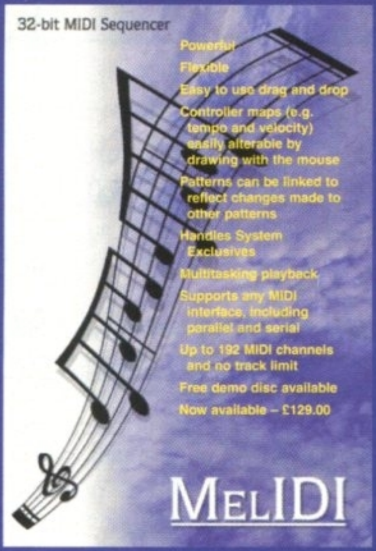
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Second hand machines:

These machines have mainly come from schools and businesses. As such there are various brandings, labels, markings, scratches, very occassional broken bits (e.g. front flaps) on the cases. All machines have been generally cleaned and air dusted inside to get rid of most of the dust, however the cases have not been meticulously cleaned as this would take a long time and increase the prices considerably. Any machines which have PC cards are usually 486 cards, but as these are basically worthless, their value has not been taken into account (and they might not have all the software on the disc to work them anyway).

Get free carriage if you also take a monitor (the 'b' indicates an additional £10 carriage charge). Keyboard, mouse and mains cable included. Single slice machines do not have backplanes unless specified; two slice machines have four slot backplanes. Ethernet cards etc. can be taken out if not required. There is a three month warranty on these machines and they are supplied 'as seen', so to speak. All details are subject to change and please check availability before ordering. A7000(+) machines are also available – please ask for details.

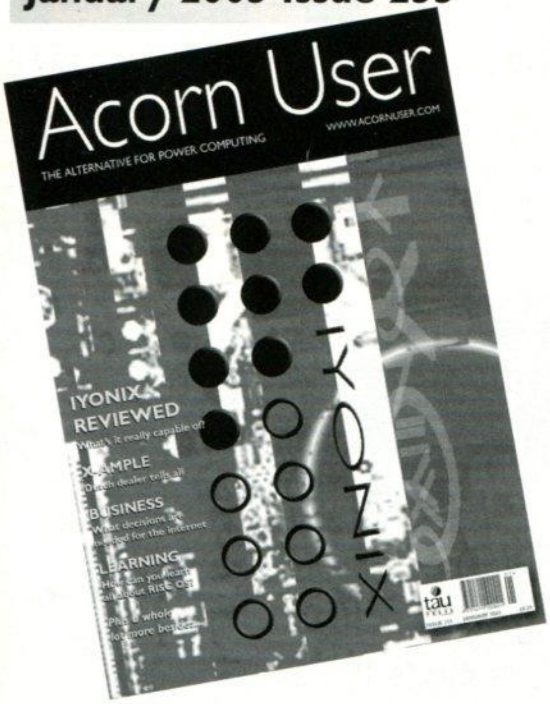
RPC 610, RISC OS 3.5, 16+1Mb, 203Mb HD, Combi ethernet card, PC card	£110.00b
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RPC SA, RISC OS 3.7, 24+1Mb, 203Mb HD, Combi ethernet card, CD drive, PC card	£300.00b
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RPC SA, RISC OS 3.7, 12+1Mb, 2014Mb HD,Cumana CD,10BaseT ethernet, PC card	£320.00b
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Editor's Comment

The Iyonix PC is getting a fair old bit of coverage around and about the world. First on SlashDot the famous news portal and then on the Guardian Online.

Creating a PR image is critically important for something like this, as it would be for any new product. And if it is done right it can make a big difference to future sales.

There is nothing to be gained from placing a couple of adverts and, when they don't generate any response, blaming everyone and his dog as to why they are too stupid to realise what a great product you've got.

One thing an advert on its own doesn't have, generally, is credibility. This is something that has to be built in the minds of the potential customer. And once it has been built it can be traded for sales.

When someone buys something from you it is a matter of trust. They have to trust you, that you are going to deliver what you have promised and, usually, what they have already paid for.

Unfortunately that trust is all too often betrayed out there in the big bad world. And when you are duped who gets blamed? Well sometimes it's the organisation that did the duping but often you get blamed yourself. For having been stupid.

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No, so you don't believe people when they say that a new and better mousetrap has been built. But when someone else says "Hey, look over there. That guy has built a better mousetrap!" Then you look.

Has he really? What are the benefits of this better mousetrap? Does it look nicer? Is it better made? Does it trap more humanely? Can it trap more mice per hour than the previous mousetrap? Is this just a souped-up model with a new spring or is it genuinely something new?

Well, we genuinely have something new. So let's crow about it and get those news items into every publication that we can. It's important.

Rob Donaldson

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Gaming pack incs;
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Focus game of your choice
low cost upgrades available e.g. to 1300 Mhz £17.00 +, to c512MB £30 +



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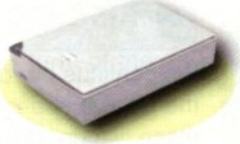
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All monitors inc 3 yrs wty unless specified

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Canon BJC S520 Photo €	A4	£85.10	£99.99
Canon BJC S750 Photo #	A4	£127.65	£149.99
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	Ex VAT	Inc VAT
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16Mb SIMM EDO/FPM	£12.00	£14.10
32Mb SIMM EDO/FPM	£17.00	£19.98
64Mb SIMM EDO/FPM	**£35.00**	**£41.12**
64Mb SIMM RS 50ns	**£45.00**	**£52.87**
128Mb SIMM from	£85.00	£99.87
1Mb VRAM	£20.00	£23.50
2Mb VRAM	£69.00	£81.08
128MB 133M SDRam	£10.21	£12.00
256MB 133M SDRam	£18.72	£22.00
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One box of items totalling upto 25kg...£7.00 + vat
Computer systems..................................£14 + vat
All prices are correct going to press. E&OE
All goods are fully guaranteed but not supplied on approval.

Castle release Iyonix PC

To the surprise of many, Castle Technology Ltd released the Iyonix PC at the Midlands Show in December. Further launches in Germany and the Netherlands took placed during December.

The full specification, including bundled applications is now:

- Totally new motherboard design
- XScale 32-bit ARM processor
- RISC OS 5
- 64-bit DDR RAM for high speed access at 200MHz
- UDMA 80GB Hard Drive
- Support for industry standards (USB, PCI)
- Dedicated high performance graphics card
- CD-ReWriter (48x speed)
- Wide range of bundled 32-bit software

The Iyonix PC is launched as a high specification model featuring 128MB of 64-bit DDR RAM, an 80GB hard drive and CD-ReWriter all for £1299 inc VAT. This Iyonix PC features an Intel XScale 80321 processor running at 600MHz, more than 250% faster than the latest StrongARM processors.

The first "premier batch" of 50 systems was available at the Midlands RISC OS Show at Birmingham and then on a first come-first served basis after that.

Iyonix hardware

A completely new motherboard features a hard-wired XScale processor for maximum reliability, with a single RAM slot to accommodate a 64-bit 200MHz DDR RAM memory card. We are told the single memory slot improves reliability and avoids occasional problems seen with previous machines using unmatched memory cards, but it does also mean that you either have to discard or trade in your old memory if upgrading, however the launch machines were supplied with 128Mb which should be more than adequate for most peoples needs.

Four PCI slots are fitted, two with a 64-bit bus, two with a 32-bit bus. Two of these slots are already occupied with system PCI cards. Firstly an nVidia GeForce 2 MX400 graphics card which allows the high resolution screen modes. Secondly a USB 2 expansion card with four USB ports (two ports available on the rear and two ports available on the front facia) although as shipped, the Iyonix only supports the USB 1.1 protocol in software, but presumable because the hardware supports 2.0, allows for future software upgrades to allow this. There are an additional two USB slots provided by the motherboard, but due to issues with one of the controller chips, these are not used and are blanked out.

The motherboard also accommodates two IDE connectors with UDMA support for hard drives, with a super-quiet 80GB drive fitted in the launch model, albeit only using PIO modes at present (UDMA coming soon Castle tell us) so expect to see more performance increases down the line.

A 32-bit EASI podule connector will take a two-slot backplane to accommodate podules. A floppy disc drive is fitted as standard in one of the two 3" bays. A CD-Writer is fitted in one of two 5" bays in the launch model. This supports 48X read, 48X write and 24X rewrite.

Sound is to CD quality AC97 with 16-bit soundblaster support as standard.

The power supply is a 250watt PSU with a two-speed thermally controlled fan offering near silent operation.

MicroATX Case

The motherboard, expansion cards and built in devices are enclosed in a strong metal cage housed in a MicroATX midi tower case with dimensions 360mm high, 185mm wide and 402mm deep. The front of the case provides a 'Soft-on' power switch, with power on LED and hard disc LED. There is also a recessed 'Reset' button. The 3.5in and 5.25in are accessible from the front of the casing if required, and two USB ports are available. The case carries the Iyonix PC logo and branding.

At the rear of the machine there is a power-in socket, two RS232 serial ports, 10/100/1000 baseT networking port, audio-in socket, Mic-in socket, audio-out/headphone socket, video socket and two USB ports. There is also a hard power on-off switch. Note the absence of a parallel port, PS/2 mouse or keyboard connectors ‹ so all those with PS/2 keyboard and mouse switches will need either adaptors or a separate USB mouse and keyboard.

The video output from the GeForce graphics card provides for resolutions of up to 2048 x 1536 with 16 million colours. Refresh rates run from 60MHz to 240MHz depending on screen resolution selected.

Iyonix Software

The operating system is the latest incarnation of RISC OS derived from Pace Microtechnology PLC and now fully rewritten in 32-bit format to take advantage of the latest 32-bit ARM compatible processors (eg XScale). RISC OS 5 is feature equivalent to the previously released RISC OS 4.02 but incorporates many new features and a completely new set of desktop icons to give a modern sophisticated look to the RISC OS desktop.

USB printing is now supported although the launch machines did not ship with the updated version of !Printers which supports USB printing, but a small utility which allows you to select a USB printer.

The Font Manager has been updated to include support for 16-bit Unicode fonts allowing a wider range of characters within a single font. The normal range of RISC OS fonts will be supplied but with the Euro symbol at its correct position (Alt+4).

RISC OS 5 is supplied in Flash ROM which means upgrades can easily be made. When the Iyonix PC is powered up, RISC OS 5 is transferred to DDR RAM which provides a faster response.

All standard RISC OS applications previously supplied with the operating system have now been converted to 32-bit operation including Draw, Paint and Edit.

A number of major applications are bundled with the Iyonix PC, including:

- Writer+ (word processor with enhanced Word import and export)
- Fireworkz (spreadsheet with Excel import and export)
- Oregano 2 (web browser)
- Messenger Lite (email client)
- PDF (for reading PDF files)
- Zool (game)
- CDBurn (CD writer)

A full list of "Iyonix OK" registered 32-bit software is available at **www.iyonix.com/software** For a more in-depth look at the Iyonix PC in action, see Mike Cook's review in this issue.

Omega ARMTwister explained

Microdigital have published some details of their 26-32-bit ARMTwister technology on their Web site. There has been much speculation (mainly due to lack of actual hardware being available) as to how ARMTwister would actually work.

"ARMTwister does not require the use of a 26-bit compatible processor such as StrongARM, and so of course is not held back in any way by the limits of such a processor" Microdigital inform us.

"ARMTwister is not an emulator. All instructions are executed at full speed by the native 32-bit processor" they continue. Although we note that if you apply the same logic to Aemulor, then technically that isn't an emulator either, because all instructions are also executed at full speed by the native XScale.

"ARMTwister is a JIT (just-in-time) code translation system to convert 26-bit-only instructions into the 32-bit equivalent ones, on the fly. It is implemented in the Omega NorthBridge FPGA. This takes advantage of the natural parallelism of hardware to implement the various table look-ups and calculations necessary to convert ARM code, as it is loaded into the CPU instruction cache."

This solution to 26-bit compatibility certainly looks interesting and we look forward to seeing it in action in January when Microdigital tell us they are releasing the XScale card for Omega. That's assuming they release the Omega for their latest Christmas 2002 deadline so we have something to plug it into.

User group meetings

Within reach of Bristol? BARUG, the Bristol Area RISC OS User Group, aims to meet the interests of RISC OS users in your area. They aim to cover a broad spectrum of topics and cater for all levels of interest, from novices to software and hardware developers.

The main focus is on lectures by experts in the field, but there is opportunity for discussion and other activities. They meet north of Bristol but members attend from a broad area including South Wales, at 7.30pm on the last Wednesday of the month at the Bradley Stoke Community Centre. See the BARUG web site for more info: **www.barug.co.uk**

Forthcoming meetings for 2003:
January: Paul Middleton from RISC OS;
February: AGM & Club workshop;

Basic coding

Wimpbasic has a new home, following on from the success of Wimpbasic.Com. Wimpbasic is a programming aid for the development of Wimp based software. It takes all the hard work out of programming development.

Wimpbasic allows the editing of code, windows all within the same environment, and produces compact programs at compile time. For those more complex tasks full access is available to the OS. Wimpbasic is produced by Clares.

Wimpbasic.org is an independent resource for users of the system and the Webmaster of the site has a number of requests for budding, active and ex-Wimpbasic programmers:

Have you written a Wimpbasic application? Please submit it along with its resource files for users to look at.

Have you given up Wimpbasic programming? If you have some old half-finished projects why not submit them for completion?

Do you have a Wimpbasic-related site? Please submit the URL for inclusion on the links page.

Visit **www.wimpbasic.org**

R-Comp update software

DialUp 2 v2.05 - This is a small upgrade, dealing with a minor problem reported by a customer, and providing some minor fine-tuning elsewhere.

WebsterXL 1.99r (Priority Support Release) - This has been sent out to WebsterXL Priority Support customers, and is a fairly major upgrade, including the speed-ups announced previously, many enhancements for various Web sites, an option to invert the drag-scroll direction, and various other things.

UniPrint 1.01 This upgrade dealt with a problem printing to certain printers which demanded to be given a filename when printing.

In addition to the above upgrades, RComp have already released 32-bit versions of much of their software catalogue. To reflect the amount of time, support and expense required by the move to 32-bit, they are charging an upgrade price of £15 inc VAT per application.

The only exceptions to this are people moving from Messenger Pro 1 to Messenger Pro 2 32-bit version for example. Additionally, if you have recently paid for the chargeable DialUp upgrade (DialUp2), then you can upgrade to a 32bit version for £5 inclusive. R-Comp ask that because of this situation, and because other exceptions may need to be made in the future, please consult them before sending cheques for upgrades.

Finally, for those people with several R-Comp applications, there is an upper limit on what you have to pay. Provided you order your 32-bit upgrades in one go, the maximum fee will be £75 inclusive of VAT and UK carriage. Overseas postage will be £2 per item, and the maximum fee will be £80.

R-Comp are only recommending 32-bit applications be used on 32-bit-only computers. This is because in many cases specific changes have had to be made to allow the applications to work. They will continue to support and ship 26-bit software for the Risc PC and earlier machines.

It's not clear why R-Comp have decided to go down this road, as its easier to maintain a single version of the application which works on all versions of RISC OS, which the new developer tools from Castle allow. However, R-Comp promise increased stability by offering the two separate versions.

New Programmers Library

The OSLib maintainers are pleased to announce the release of OSLib 6.40. This release contains numerous enhancements, including:

- Coverage of the latest Select and RISC OS 5 API calls
- Fixes for all known bugs in both C and assembler modes
- Updates to all build tools to allow them to be used in either 26 or 32-bit environments
- A 32-bit neutral version of OSLibSupport

This release also brings another major change; over the last nine months, the OSLib team have been working towards placing the entire OSLib and OSLibSupport source on CVS at SourceForge.net (the online open source software Web site). This work is now complete, and, in addition, the OSLib binary archives are also now held at SourceForge.

The OSLib home pages have now been re-vamped and moved to SourceForge **http://ro-oslib.sourceforge.net**, and this is where the latest release is publicly available from.

OSLib is a set of functions and C headers to provide complete coverage of the RISC O S application programmer's interface in C. It provides access from C code to all RISC O S system calls ("SWI's") which is

- efficient: often, memory access is completely avoided;
- type-safe: every argument can be

Need access to a PC but don't have space for a new monitor, keyboard and mouse?



STEP 1 - Specify a PC base unit if you don't have one al

We can supply off-the shelf or custom PC base units to your requirements.

eg:
- Duron 1.1GHZ CPU, 128MB memory, 40GB hard drive, CD drive, 8-64MB graphics £499inc VAT and Delivery

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All machines come with internal modem, our Multimedia Keyboard, Wheel mouse and Loudspeakers.

- Windows ME or XP, add £80inc VAT, MS Works, add £20inc VAT.

STEP 2 - Add our Keyboard Controlled Switch

This miniature switch allows keyboard, monitor and mouse to be shared between two machines.
Modified for RISC OS macines, rated to 1920x1440 display, complete with all cables.

- Supplied as a pack including our PS2MouseMini interface : £99.95inc VAT (Was £113.90)

- Above pack when purchased with PC base unit: £90inc VAT (was £100)

- Keyboard Controlled switch alone: £89.95inc VAT (was £99.95)
- PS2MouseMini Interface (allows PC mice to be used on RISC OS machines): £18.95

(not to scale - it's about the size of two kitchen machboxes!)

STEP 3 - Attach to your existing RISCPC/A7000 and monitor

Add a networking pack if required.......
... and switch between the two with a couple of keypresses.

Mices! MMK! USB!



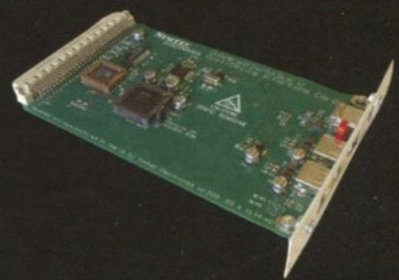
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Non-A7000 machines require our PS2MouseMini interface £18.95inc.



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- For RISC PC / A7000 etc
- 19 Multimedia keys
- Complete with Drivers
- Click/non click versions

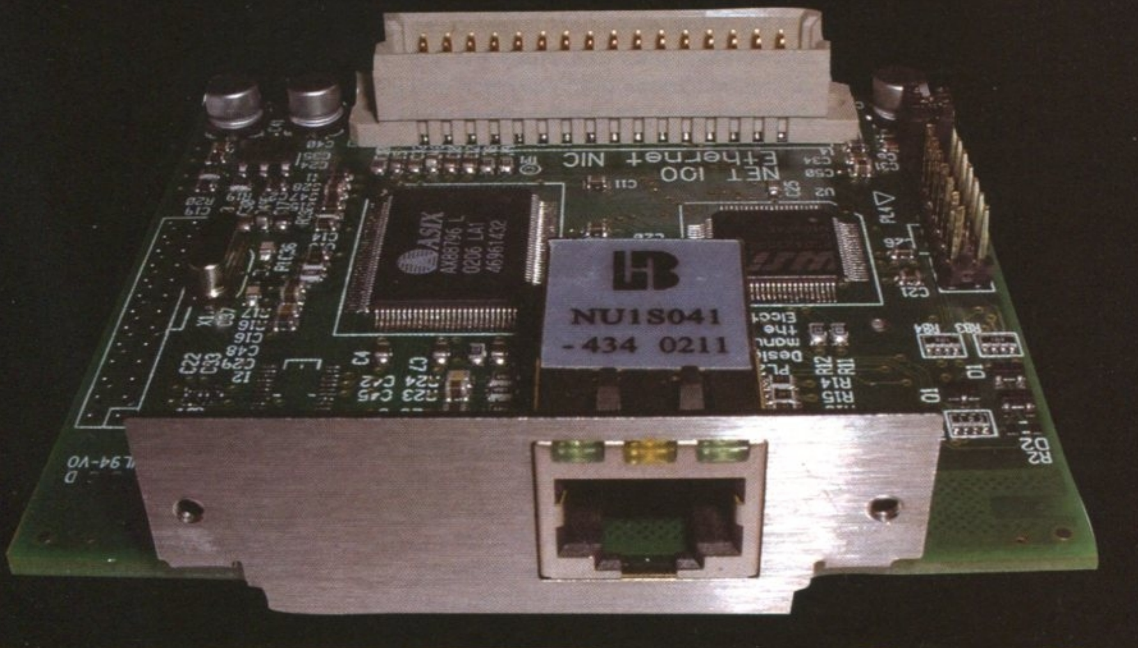
£24.95 inc VAT (was £34.95)



- Simtec USB Card.
- Supplied with keyboard mouse and joystick drivers.
- Drivers for other devices Available.

£79+del+VAT = £99inc

Long Long ago, in a place not far from here, there was a dream of a new standard. The new standard would allow RISC *OS machines* to be integrated *into fast* networks. It would *enable fast* file transfers. It *would reduce* latency and *congestion* on busy networks. *Now that* dream is reality. *That* reality is......



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- Provision to allow users to change flash contents
- Lower latency than conventional 10megabit cards
- Includes BOOTP client software
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Only £69+delivery+VAT = £89inc
Pack to link RISC OS to PC (NET100, PC Net card, Crossover cable) = £110inc
Pack to link 2x RISCPC or A7000 (NET100x2, Crossover cable) = £185inc
High performance network switches: 5 port = £45inc; 8 port = £75inc
LanMan98 £35. Cables and other networking devices available.

This Month: NET100; USB card; VirtualAcorn with PC's; Monitor, keyboard and mouse sharers; Multimedia Keyboards; Genius Mice

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STD
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type-checked by the compiler;
- obvious: a SWI is called by the "obvious" syntax;
- complete: every SWI is covered;
- register-safe: hides (often idiosyncratic) register allocation;
- language-independent: although the headers are specific to C, the library is not, any APCS-conformant language can call it.

It also provides names for all the data structures and reason codes used by the API. Code that uses it is superior to similar code using _kernel_swi() or _swix(), both in terms of the compile-time checking that is available, and often in the size and speed of the code generated.

Swifter JPEGs for RISC OS 3.1 users

SwiftJPEG has been updated to version 1.02. SwiftJPEG is a JPEG file viewer that uses the fast direct JPEG plotting capabilities of RISC OS 3.6 upwards, but which, by loading various support modules, can also run on RISC OS 3.5 and 3.1.

Changes include EXIF image support. Most digital cameras produce EXIF images, which are more or less standard JPEGs with a bit of extra data stuck in at the start. The OS routines can't quite cope with them, but with a few changes to the start of the file as it is loaded into SwiftJPEG (no copies are made and your original file isn't altered at all), they can be plotted. This means you can now view your digital camera images directly, even on RISC OS 3.1. SwiftJPEG will also now handle thumbnail images generated by programs like !EXIFinfo.

This conversion is only done on RISC OS versions prior to 4. RISC OS 4 is assumed to cope gracefully with any file. Regardless of OS version, SwiftJPEG can still only handle images that the OS fundamentally supports, so (for example) if you don't have Select 2, you can't use it for progressive JPEGs.

If you are using RISC OS 3.1 and you've got the JPEGMsgs and JPEGRender modules from !Browse, and they're in !System, SwiftJPEG will pick these up and use the system sprite area instead of dynamic areas (you'll need to make sure at least 32K is allocated to the sprite area, and SwiftJPEG will take care of allocation after that).

If you're running a dynamic area emulator and SpriteExtend 0.99, that should work too. More details are in the !Help file.

Fixes the "pinboard recaches background sprite" bug, no more long waits after Full Screen mode. The on-screen displays now work in 4x4 modes (e.g. mode 13).

SwiftJPEG 1.02 can be downloaded from **http://nines.rowing.org.uk/folder/**

Aemulor announces launch date and pricing

The 26-bit emulator for Iyonix PC will be available January 2003 priced at £50+vat for the entry-level version which features:
- Full 26-bit application emulation (C, ARM Code etc)
- Fast XScale-optimised pure ARM code interpreter engine
- 26-bit module/RMA support
- 26-bit BASIC assembler support
- Basic JIT provision
- RISC OS 4 > 5 SWI emulation
- SWI Flag preservation

A pro version will be launched later in the year offering even greater performance and support for the low-colour screen modes which aren't available on the Iyonix PC rendering applications which require them unusable, Sibelius currently cannot work even with the Aemulor, this will be fixed.

Meanwhile, the number of applications working under Aemulor still grows steadily, with approx forty 26-bit applications now listed as working on the Aemulor Web site.

To combat software piracy, Aemulor will require the Iyonix PC MAC address (the unique network address embedded into each Iyonix motherboard) when purchased, as then will only function on that particular Iyonix PC.

To see if your 26-bit applications have been tested, visit the compatibility database at **www.aemulor.com** and for other development news, see the support and discussion forums at **http://support.aemulor.com**

Updated ARMalyser

ARMalyser version 0.41 is now available from **www.armclub.org.uk/free** ARMalyser is an ARM code analyser that understands RISC OS executable, module, object and library formats. It can output disassembler or ObjAsm assembly styles, in plain text, fully hyperlinked and syntax coloured HTML, XML or custom formats for import into Impression, EasiWriter and Ovation Pro.

It has extensive analysis features to detect problems that may be encountered when converting code to 32-bit. It is available for 26-bit and 32-bit RISC OS with a desktop front end, and command line versions for Win32, ARM and x86 Linux.

0.41 is a fully 32-bit build and will require the new C library, which can be obtained from the link above. The previous release, 0.35, contained both 26-bit and 32-bit executables with different filenames, so you may want to delete the old copy rather than installing over the top, to avoid leaving redundant files behind.

Some new features in 0.40/0.41 are:
- Partial emulation is a major new feature that enables the value of registers to be determined via immediate MOV's, loading from memory, or PC relative calculations, and then tracked as many arithmetic operations are performed on them. This results in more accurate recognition of code and data areas from direct use of register contents or when they are passed to known SWI's Shared C Library routines
- Improved code commenting to warn the user or potentially problematic instructions and code sequences code comments are now prefixed with "CAUTION:" for easy searching.
- New cautions for 32-bit porting have been added to aid in the identification of unsafe code when porting to 32-bit, including:
  - Bad addresses for relative and dynamic branches
  - Should be a NOP after a previous instruction
  - Should not access banked register after a previous instruction
  - SWI after CDP
  - Potential manipulation of PSR in address
  - Conditional LDM/STM may be slow
  - Instructions which may be unpredictable on some ARM variants
  - Write back to PC
  - Load/Store of PC with non word transfer
  - Base register in LDM/STM register list with writeback
  - Write back with user register bank variant LDM/STM
  - Use of PC in multiple or SDS instructions

• Invalid multiple use of register in multiple or SDS instructions
• Conditional MSR StrongARM bug
• MSR immediate with non flags field
• Use of PC as Rm

Further updates are:

• 26 / 32 bit mode guarding so that ARMalyser can recognise tests for whether the processor 26-bit or 32-bit mode using TEQ PC,PC, and not caution the use of 26-bit only or 32-bit only instructions which are only executed on the appropriate condition, or are in a block of code which has been taken or not taken on the result of the test.

There have been bug fixes as well:

• Wimp and toolbox message length validity checked
• VDU variable block end point detection fixed
• Register contents emulation now takes in to account relocated addresses solving problem with Shared C Library stubs not being found in C modules
• Problem with warning label generation when only outputting assembler fixed (could cause crashes)
• Coprocessor register transfer on control processor decode corrected
• Now accepts AOF and ALF files with text filetype for GCC

In brief

Sine Nomine Software have released 32-bit compatible versions of:

Prune: for cutting family trees down to size

FX80Emul: for emulating 9-pin Epson compatible printers

SpriteClean: for cleaning up scanned line art

All are now available for download from **www.sinenomine.freeserve.co.uk/software/**

More upgrades

More 32-bit compatible upgrades from Mark Beerling:

SAMP: A Simple Sprite Animation and Manipulation Program. Designed as an aid to produce animations (for example animated GIF images for Web sites). A few special effect functions are built in along with useful general purpose sprite manipulation functions. New this month are two extra rotation effects, a Ticker Tape effect for scrolling text and two delete functions. The source code is included inside the application. An upgrade to run native under RISC OS 5 is available.

VwSprt: View Sprite is a simple application to display an animated sprite in a window. To be used alongside !SAMP. The source code is included inside the application. An upgrade to run native under RISC OS 5 is available.

STRing: Scanned Text Recognition has a RISC OS 5 upgrade available.

All can be downloaded from: **www.arcsite.de/hp/mrb**

GedcomWeb 3.00

This application is now available from **www.sinenomine.freeserve.co.uk/software/** and it enables you to convert GEDCOM files into JavaScript family tree Web pages. Unlike Web output from other genealogy software, GedcomWeb's output is interactive, allowing the user to view and print different parts of a tree, and display in different styles.

Even if you don't want to display your family tree on the Web, the output is still very useful for sending to relations who may not have genealogy software, as it will work with any modern Web browser on any type of computer.

New features in version 3.00 include:

• Support for lots more GEDCOM fields including occupation, christening, baptism, cremation, burial, plus more detailed event fields.
• You can now put in your own HTML headers and footers for the web pages, so that you can add your own logo or link to your homepage at the top of the tree
• A redesigned choices interface so you can customise everything
• Improvements to the way trees are displayed, including the option to display the central person's siblings

This version of GedcomWeb has been compiled to run on 32-bit versions of RISC OS. If you are using it on RISC OS 3 or RISC OS 4 you may need to upgrade your System modules to obtain the new Shared C Library. Details of how to do this are on the web page and in the ReadMe file which accompanies the release. Users who would prefer a 26-bit-only upgrade should contact the author.

Online registration is now available again: details are on the Web page. Existing licensed users can upgrade by downloading the demo version and dropping it on top of their existing copy of GedcomWeb.

32-bit compatible WimpWorks

Jaffa Software is pleased to announce that v2.34 of WimpWorks is available now, and is fully compatible with Castle's new Iyonix PC.

WimpWorks is our Integrated Development Environment for RISC OS, which allows you to create Desktop applications in BASIC quickly and easily. For example, a simple clock can be created by typing just two lines of code.

Applications which have been previously produced using WimpWorks can, generally, be made 32-bit compatible by simply resaving them in the new version. The only exceptions will be if an application includes inline Assembler or relies on a non-32-bit compatible module, in which case Aemulor could be used to run the application on Iyonix.

To allow further development and to cover increased costs, this release sees a small price increase and a chargeable upgrade to existing users.

However, for the first time Jaffa Software can now accept payment online ‹ including credit and debit cards.

The prices are now: Full version £39.99; Upgrade for existing users £9.99; Upgrade from WimpBasic, ArchWay, HelixBasic or WimpGen £19.99.

More details, and a fully-functional demo are available on the Web site: **www.jaffasoft.co.uk/product/wimpworks.html**

E-mail threats and viruses worsen in 2002

Viruses, spam and malicious Internet scams transmitted by e-mail all grew sharply in 2002. These pose a threat to the smooth running of worldwide e-mail systems, according to security vendor MessageLabs. Spam now accounts for 40% of all e-mail and is set to rise above 50% next year. One virus was sent for each 212 e-mails in 2002, compared with one per 380 e-mails in 2001.

The technical sophistication of viruses continues to increase, exposing weaknesses in traditional PC anti-virus software (thankfully RISC OS systems are immune to PC viruses). Blended threats, where spam e-mails are combined with viruses, showed sharp growth in 2002. Trojans, or attacks targeted at companies and individuals, rose sharply in 2002.

Malicious scams, such as the Nigerian e-mail advance fee scam, are continuing to proliferate and prosper. The Nigerian advance fee scam is expected to gross $2 billion in 2003, making it that country's second-largest industry. Frankly we are amazed that anyone would be so stupid as to fall for it.

Family trees: the Draw way

Genealogy has grown in popularity since personal computers entered our everyday lives. The computer makes keeping records easier, and there are several genealogy programmes which can present your data in various ways. However, you don't need one of these programs; you can devise a system for presenting your family tree in an attractive way simply using Draw. There is also a degree of control over the look of your tree in Draw which isn't available in genealogy programs.

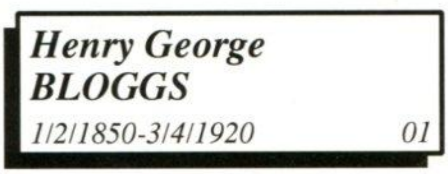
The basic unit

The key to this system is a basic unit which will contain the information you want for each member of the family. This could be as simple as name and dates of birth and death, or you could expand it to include any subsidiary details you may think of. Let's start with the basic data.

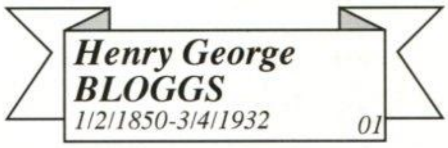
Click on the Draw iconbar icon to open a blank Drawfile. Select menu-Misc-Paper limits-Landscape. Then press F1 and Shift+F1; this shows the grid and activates the grid lock. The default setting is 1 2 cm which is fine at the moment. We're now going to draw a rectangle: start it at one of the cross hairs on the grid and go down to the next cross-hair and along to the third. This gives us a box of 3010 cms. Zoom in (shortcut: press Shift and draw a box round the area with the right-hand adjust button on the mouse - a quick way to zoom in).

Now enter the information into the box. The type can stand to be small, so I'd suggest 8pt (menu-Style-Font size). I've gone for the forenames in bold on the first line, the surname on the second line in bold and capitals, with the dates of birth and death on the third in a smaller (6pt) size.

Since the basic unit is the most important element, get it just how you want it before starting to copy it for other family members. For example, you could distinguish it with a drop-shadow. Fill the first rectangle with



white; copy, and fill with black, no line colour, and send to the back by



pressing control+B; reposition to your taste).

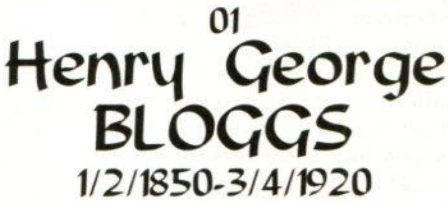
Or give everyone a fancy border:

or create a design which suits you. This one uses a white box and a centered, script font:

Just before you save the file, select all and group.

Organisation

This system relies on organisation. A place for everything and everything in its place. Create a directory and call it something like "Data" or "Members". Each member of the tree will be held in a separate Drawfile. Save the box with



Henry Bloggs's info into this directory.

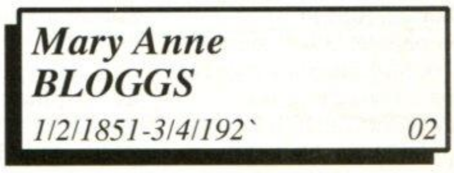
You can either save the boxes with individual's names, or assign each person a number and keep control that way. In the illustrations there's a number on the bottom right-hand side. I would save it as "01". To be on the safe side, copy file "01" as "Master".

For each subsequent member of the tree, use this first file as a template. First, copy it with its new name: say, "02". Open the new file and select the first line of text. Press Control+E and a window will appear with the raw text in it. Simply press Control+U (to clear the present text) and enter the new text. Press Return and the new text replaces the old. Do this for each line until you have created a new file: Save this and for each member repeat this process.

@cap:Building the tree

Open an A4 landscape-format Draw page, and we'll start by dragging into this page the individual files of one generation (say, you and your brothers and sisters). Across an A4 page you'll have room for about seven files with a good space in between them (to allow for spouses). If you need more than that, create a larger page. Once that generation is in, group them and go to menu-Select-Justify-Top, then ungroup them again (Control+U). Space them visually.

Each entry will be joined with at least one connecting line from the previous generation or to the next generation (depending on whether that person has had children), so now is the time to design these lines. A simple, straight line is easiest, as it can be drawn easily with the help of the grid lock (you may want to change the grid setting to 1 10 cm for greater flexibility). Here I've chosen a straight line with 1mm width but you could choose any line.



Build up the tree in this manner, making sure that each generation is on the same level, and standardise the spacing between generations, and between individual boxes.

It's likely that your tree will extend beyond the limits of the A4 page, that doesn't matter. Go to Misc-Paper limits and choose a larger page, say A2. Also tick the "Show" option in the same menu. That will give a grey border which is the printable limits of the page. As the tree expands, select all and move so that the bottom left-hand of the tree is within the border. When you're ready, print off the first page, then select all again and shuffle it so that the next page-worth is within the border and print again. Eventually you'll have a few sheets which will overlap slightly, so you can tape them together to make one big tree.

Nigel Gatherer
graphics@acornuser.com

• Wanted: All Acorn A3000s, A3010s, A3020s, A4000s, A5000s, A4s, Risc PC 600 & 700s, StrongARM Risc PC's, Kinetic Risc PCs. Anything considered. Can travel. 07930 507815 or 07775 776217.

• Acorn A5000 including monitor etc plus additional software including Advance suite. Any sensible offer considered. Contact Robert on 0191 5191231 or at **robertvardill@beeb.net**

• Wanted: Irlam Instruments Videodesk editing system. Any other video editing card suitable for use with a Risc PC also considered. Please contact **chris@acdale.demon.co.uk**

• Eagle M2 multimedia card; replay video production, HQ video stills, digital stereo sound sampler, full MIDI IN/OUT/THRU facilities, RISCPC compatible. Offers around £160. Multimedia software; Midiworks, Prosound, Cineworks (includes AppleFS) and Genesis Professional £35 each plus postage or £120 for all three. Eagle M2 plus all four packages £250 plus postage. Enquires or offers 0151 547 3993 or email **aokai@tiscali.co.uk**

• A two foot stack of Acorn User magazines for sale, complete with cover discs, from Sept 1994 to end 2001. Also other Acorn magazines and discs. Best offer secures this 12kg pile. Tel. Coventry, 02476 319519

• For Sale,586 PC CARD for Risc PC, by Aleph1,includes PC Pro 3,also Windows 95 or 98, cost over £300 pounds, will accept £90 or near offer, Radcliffe,Manchester,please phone 0161 280 3375 or email, **j.jackh@ntlworld.com**

• 30 A5000s with hard drives, classnet network cards and keyboards. If anyone is interested, give me a ring on: 07909 588867.

• Acorn BBC B issue 7 and Cambridge Micro Z88 computers. Complete boxed Achimedes A3000 Learning Curve set. Loads of mags and software. E-mail **dannyb@comms-unit.com**

• Acorn User, Acorn Computing and Archimedes World mags from between 92-96. With disks but not CD's. Plenty of issues. Also; RO3 PRM's and other programming guides. Any of it is yours if you pay the postage. Tel: 01242 244227.

• RISC PC 700, S/A, RISC OS4, 89b HD, 48x CD, Midi, SCSI, 19" monitor, 36Mb RAM, Loads S/W, Inc: Easiwriter, Ovation Pro, Sibelius 7, Intersuite. **richard.benjafield@ntlworld.com** 07968985178 £400

• One BBC Master 128 with Z80 Torch pack (CP/M) fitted and twin Z80 disk drives. Second BBC Master 128 with internal 6502 2nd processor fitted with twin Cumana 40/80 drives. Offers please 01702 585358 or e-mail: **jar89@btinternet.com**

• Acorn Risc PC (upgraded), PLUS strongarm,Windows 2000, scanner, colour printer (Epson), Pro-artisan art, Impression word process. Dorset. £500. E-mail: **Sueedwards01@yahoo.co.uk**

• For sale: A4000S (A4000 in Semerc case), 2Mb Ram, 400 Meg harddisk, Serial mouse, A5000 keyboard, Userport podule (HCCS Multipodule), RISC OS 3.11. Sensible offers. Can supply VGA monitor for extra 30 pounds. Tel: Bristol (0117) 9425082.

• Anyone want an original unused 486 PC Card (ACA 42) for Risc PC with DOS Software all boxed, manuals etc. Pay the postage or collect from SE London. Tel: 020 7703 5158 or **des.dept@btinternet.com**

• Wanted: 100MB Zip drive, external parallel port type, also Argo drivers. Will pay £50 and collect within 50 miles of Bracknell. Richard 07956 624412 **richarda.green@invensys.com**

• For sale: (a) Acorn 1 A7000+ with inkjet printer. (2) Acorn 2 A3020 with scsi MEU inc cd rom drive. Both have monitors are in working order and are ex school systems. Offers please, purchaser must collect Stalybridge, Cheshire, England. E-mail **acorns@rastin.com** or text 0777 934 1383 I will reply to the best offers

• RISC OS 3 PRM's and other Acorn programming books. Free to pick up or 20 GBP. tel: Cheltenham (01242) 244227 - Chris. Also Acorn user mags issues around ?80-130? free to pick up only.

• For sale: Acorn pocket book 2, with A-link, manuals, etc. £50. Tel 01424 846213

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Iyonix Review

Well you all read the technical stuff last month but that was just specifications, what I want to know is exactly what it feels like to have a new RISC OS machine all to myself after all these years of waiting. Not that there haven't been different machines since the Risc PC its just that none of them have represented the next jump in computing power since the Risc PC got it's StrongARM card.

But what we have here is not just a new machine but a new version of the operating system as well, a sort of double whammy. I use the word whammy because new seldom equals plain sailing. Look back at reviews of then new machines in the past, like when the Model B became a Master, and you will see not only praise for new features but, perhaps dominating the writing, is reams of what is wrong or what old software won't work.

Acorn-based machines have always excelled in the backwards compatibility stakes but with either new hardware or a new operating system there are bound to be casualties, but if we don't take the hit we won't make any advances.

So I unpacked this new machine and wired it up to keyboard and mouse, the first surprise is that they are both USB devices, it comes home to you that this is now the modern way of doing things. Happily there is room for these round the back leaving the two front-mounted sockets for your transitory peripherals.

Now plug in the power and flip the



switch at the back ... and nothing. No, there's a power switch on the front as well, so turn that on and there is a small heart stopping moment when you think it's not working at all. You see for years I have been subconsciously listening to the reassuring clunk - whirl - bing of the Risc PC as it powers up with a reassuring screen display after only five seconds.

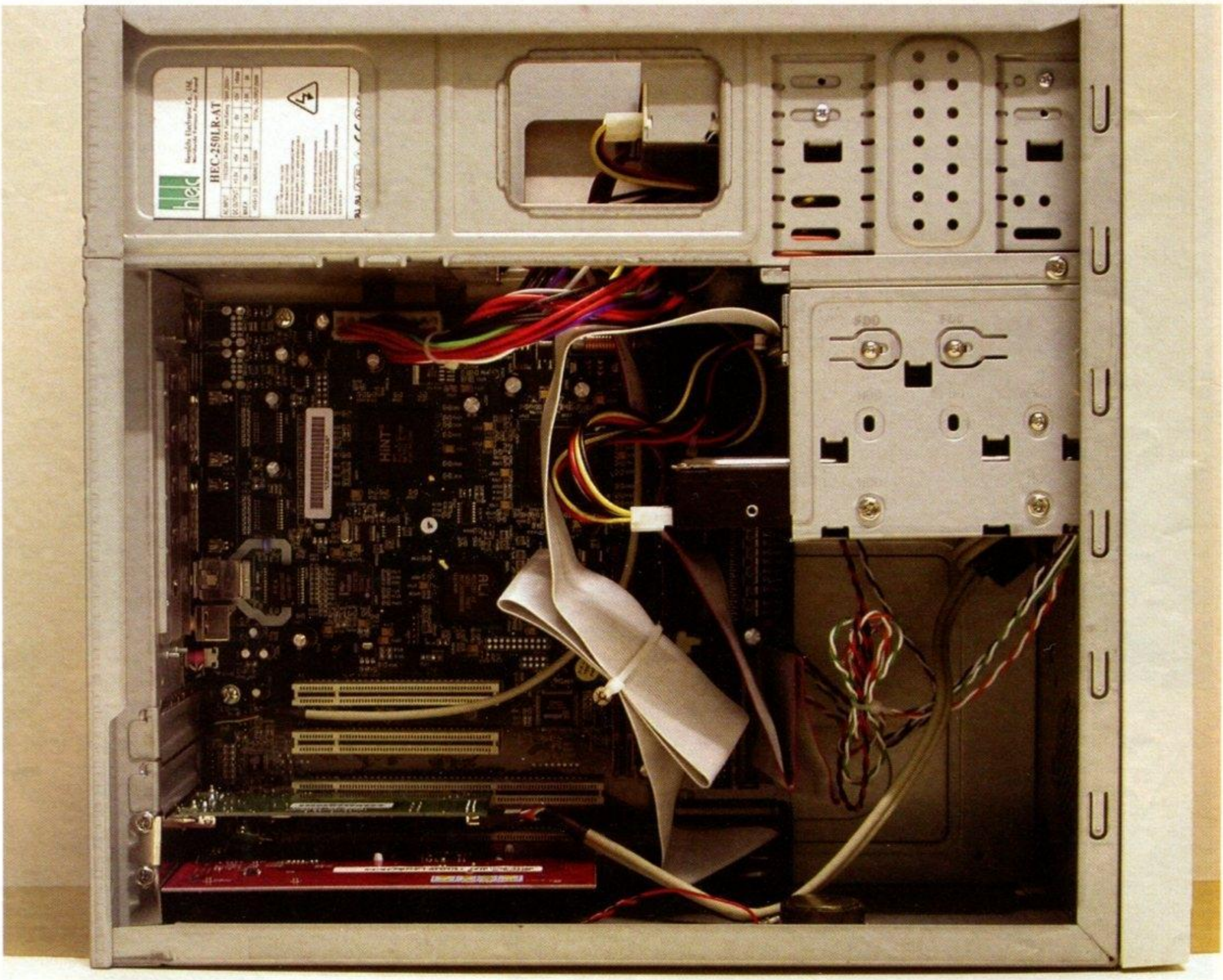
The Iyonix is different, silence... and more silence... and just when you think it is broken, up pops a line on the screen saying you have a 80321 processor. It's taken fifteen seconds to get to that point but after that it's a mere five seconds to the desktop, a miracle for Mac or PC users but we are used to that sort of thing.

The first thing that struck me was the quality of the display, coaxing a 24-bit 1152x896 resolution with 75Hz refresh rate, image out of my AKF85 monitor. This is slightly more that it will officially take but the results look so much better that the 16-bit 1024x768 60Hz display I am used to. The icons too were... well, different... but with their familiar layout apart from a new one nestling between the hard drive and the floppy, that's a network icon for all those shared drives out there.

So first off I want to see how fast it is. I have recently got a new digital camera a Nikon Cool Pix 4500, this produces rather large 800K JPEG files of 2272 X 1704 pixels, on my StrongARM RISC PC these take a whopping 40 seconds to decode using ChangeFSI the Iyonix cut that by over half taking 16 seconds in fact two and a half times faster.

Now this program isn't the fastest JPEG viewer in the world so I tried JCut which reduces this to 10 seconds on the Risc PC, sadly the Iyonix told me that the application was not 32-bit compatible but I was hoping for a sub-four second decode. Not quite the half second of my Dell laptop, but then this is a floating point computation intensive process and regular PCs have the advantage of floating point hardware, the ARM has always struggled to keep up here.

Once decoded however the Iyonix showed off it's speed by allowing a smooth scroll around the image on a full size window. The Risc PC by comparison updated the window in blocky strips rather than scrolling. Dragging the window around the desktop too was a very smooth experience. One slight snag was that as I was dragging image files from a CD and about one in three times I

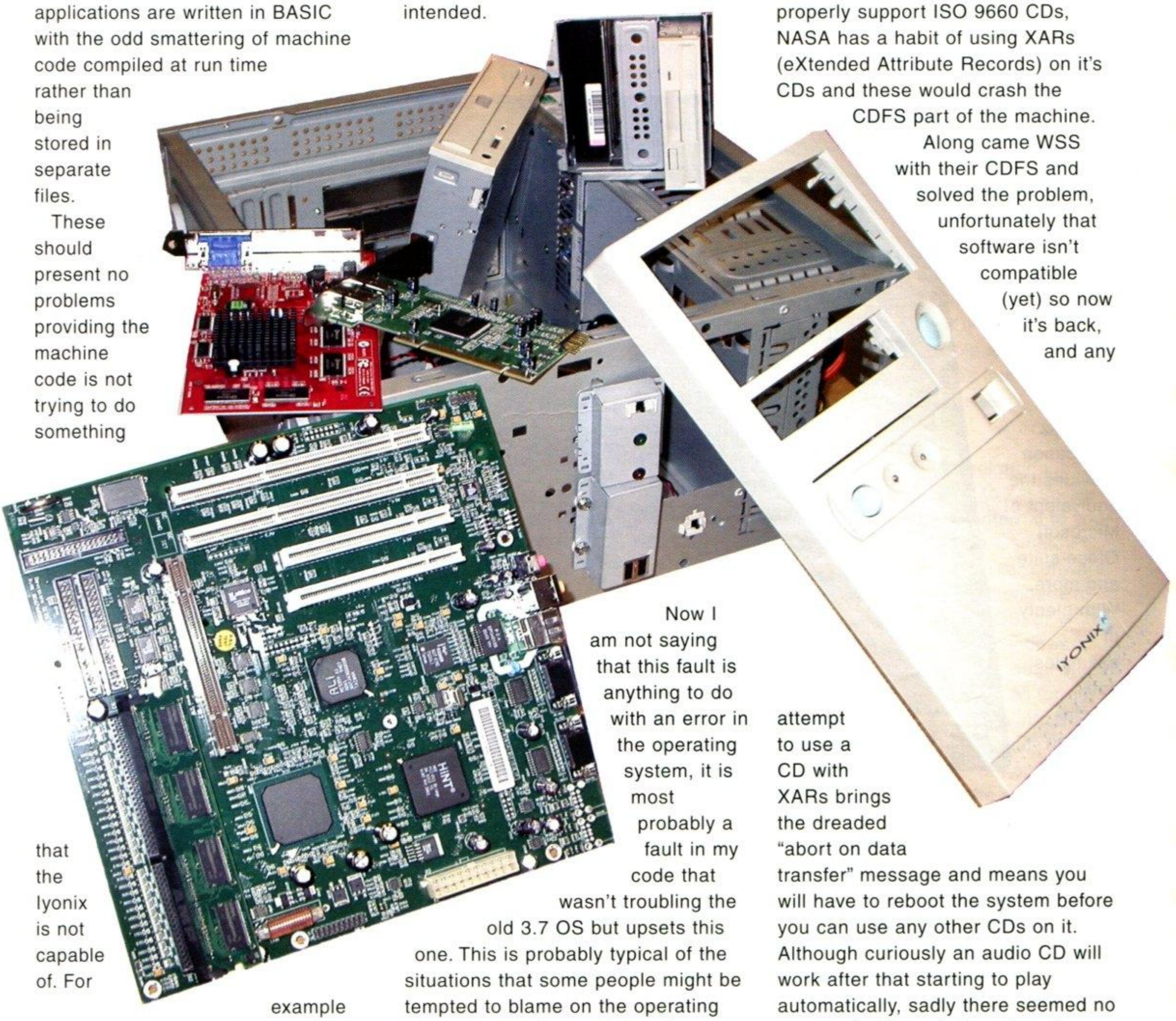


would get a dialogue box asking me to insert the CD that was already in the drive. A click on OK always allowed resumption of the loading process with no difficulties.

This brings me onto compatibility, with a 32-bit operating system any non-upgraded program containing machine code is not going to work, it will need recompiling under the new operating system. Luckily a lot of applications are written in BASIC with the odd smattering of machine code compiled at run time rather than being stored in separate files.

These should present no problems providing the machine code is not trying to do something that the Iyonix is not capable of. For example the Parallel_Op calls produce a SWI unknown because there is no parallel printer port to operate on. Similarly any attempt to use bank switching, such as I used in my 3D image viewing experiments, will fail because you can't bank switch the graphics card. Fortunately the reset switch is on the front of this machine.

Other oddities included my image processing application Raw_Read, for some reason any attempt to type something in the resolution icon brought up the error message "drag the icon into a directory", ignoring the dialogue box and typing made the application work as intended.



Now I am not saying that this fault is anything to do with an error in the operating system, it is most probably a fault in my code that wasn't troubling the old 3.7 OS but upsets this one. This is probably typical of the situations that some people might be tempted to blame on the operating system but in the end has to be put down to incompatibility.

I had a random flick around some of the Acorn User CDs, with a very unscientific sample only about half of the *Info programs worked, the others reporting not a 32-bit compatible file or "screen mode not available". However, hope is at hand, just as I was completing this review the Aemulor, the software emulator for the 26-bit mode of the processor, flopped on my doormat (well in the e-mailbox anyway). A review of this should be in the next issue.

Sadly one retrograde step is the operating system for the CD drive. I had fought a campaign with Acorn to properly support ISO 9660 CDs, NASA has a habit of using XARs (eXtended Attribute Records) on it's CDs and these would crash the CDFS part of the machine. Along came WSS with their CDFS and solved the problem, unfortunately that software isn't compatible (yet) so now it's back, and any attempt to use a CD with XARs brings the dreaded "abort on data transfer" message and means you will have to reboot the system before you can use any other CDs on it. Although curiously an audio CD will work after that starting to play automatically, sadly there seemed no way to shut it up. I also missed having proper folder names on CDs the Iyonix puts them all in upper case, truncates them to 8 characters and removes spaces.

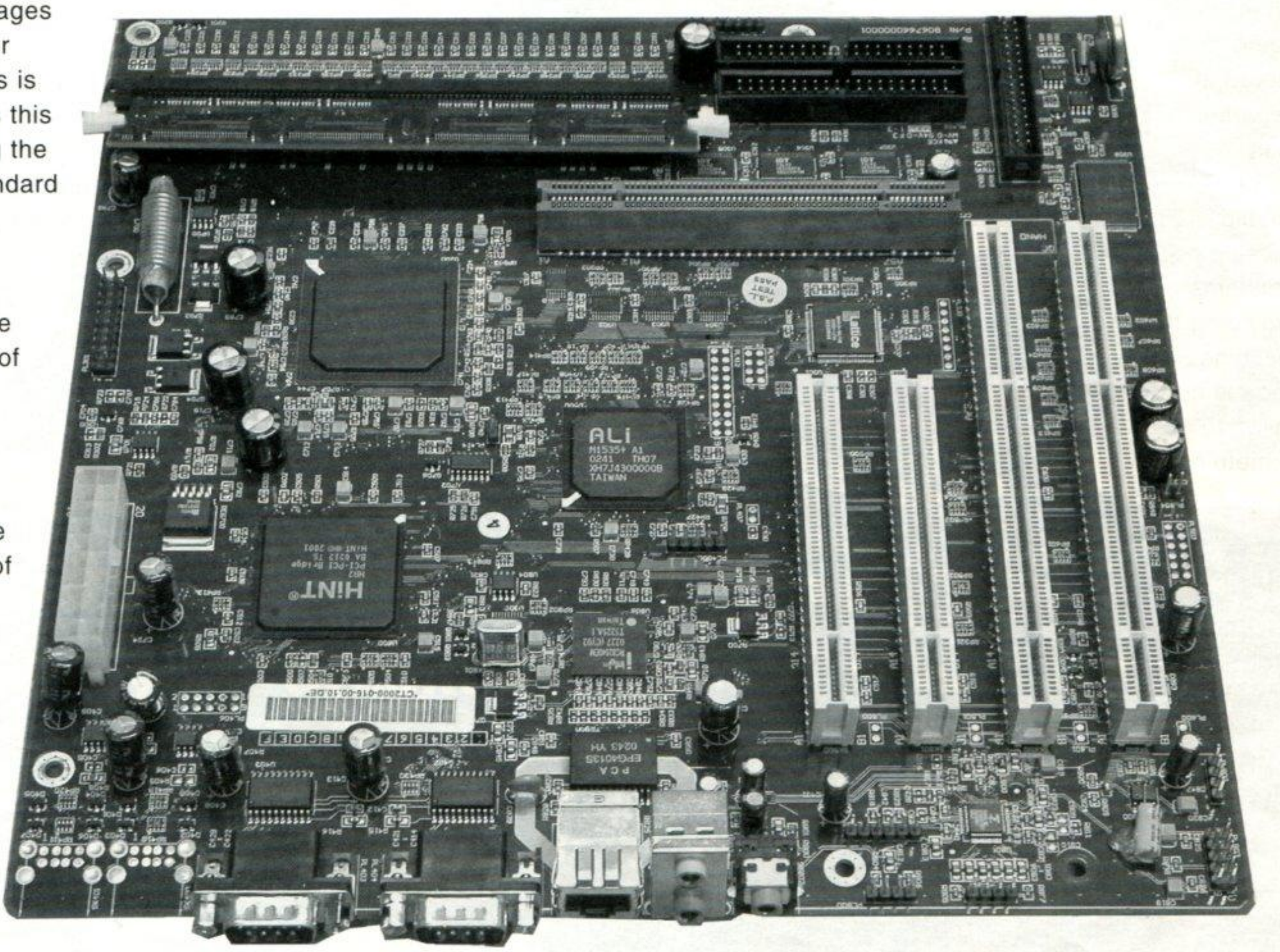
So here's hoping that WSS get a 32 bit version for their excellent

CDFS soon, you never know there might be one by the time you read this. Speaking of WSS they do provide a bundled version of CDburn Lite to make use of the rewritable CD of the Iyonix. So they must be able to upgrade.

The Iyonix comes bundled with the sort of applications you take for granted on other platforms. I was especially pleased to see a new version of !PDF it was infinitely faster and did not appear to fall over every few pages like my older version. This is essential as this is becoming the defacto standard for most documents nowadays.

A not quite full version of the multi-talented Firewokz application provides the equivalent of Microsoft Office suite and more. With plenty of examples and articles showing just what it can do. Basically what this version can't do is print or save as a Drawfile but any document created in this version will be able to be loaded and printed in the full version or previous full versions.

Replay is also included in its 32-bit mode but sadly attempts to play any of the clips from the Acorn User Trailers CD (AUCD7 and AUCD5) resulted in the machine hanging up. Also on the same CD I couldn't access my contributions because I got a "Long Files is not 32 bit compatible" error message. As I never use that module it must be something the editor put on.



There was also Zap 1.46 which appeared to have abandoned the support for BASIC found in my ancient V1.10 but that's just probably me not having time to configure it to my liking. Write+ provides the simple word processor, well, simple when compared to the offering of Fireworkz. Finally Oregano2 provides the web browsing capability, with DialUp providing the modem connection, curiously however, Oregano2 would not display any of the HTML files on the hard drive, it would only work over the Internet. Which is a bit odd and a reversal to most free browser offerings.

There was a pleasant surprise when I came to switch it off, having gone through the shutdown dialogue it did it all by itself just like my Mac does.

Castle provide a lively user group and exclusive web access for purchasers of the machine where several upgrades to the operating system are already available. This is tapping the famous resources of the RISC OS community and I have seen many a famous name posting questions and solutions.

This machine is still developing, especially in respect to it's software. Now some people might be put off purchasing one until it's all sorted out. That would be a big mistake because you would miss the fun of getting it sorted and you would defiantly get left behind in the computing stakes. Also, it is just that much better a machine than its predecessor in terms of speed and graphics with this and its USB support this is the future of the RISC OS machine. You might miss some old favourites but you will soon make new friends.

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Getting to grips with USB

Last time I discussed the general concept of talking to USB devices by using standard messages. This time let's see exactly how to do it.

There are several different classes of message that we can use to speak to a device. One sort is the enumeration messages that asks the device what it is and how it wants to be talked to. These are used when a device is first plugged in and assigned an address, all subsequent messages are routed through this address.

I will leave these to another time and assume that our device is the only one on the bus and so has been assigned address 2. Then there are the eleven control transfer messages to find the state of the device, and finally there are the messages that



handle the data transfer itself. I want to start by looking at the control transfer as these provide most of the elements for all the messages.

Each message has a number expressed in hexadecimal from &00 to &0C and has to be accompanied by other numbers, one directing it towards the appropriate endpoint and another for the device speed.

The first thing we need to do is to open up a channel of communication to the USB board drivers and it handles the actual packetisation and error handling. This is done on the Castle USB interface by using the filing system mechanism, so that you need to open up a file and get its file ID/handle. Then using this ID you need to call operating system "DeviceFS_CallDevice" with the parameters you need for the message and the handle of a buffer where it can write the reply.

Let's look at this in detail, a typical file opening command in Basic might look like this:

```
g%=OPENOUT"usbd#address2;endpoint0;low:"
```

The string in this statement is not your usual file name but a collection of words and numbers that describe the device you want to talk to. The "usbd" part is the filing system name for the board level drivers.

Next, the address is fairly self explanatory except in a proper implementation you have to search for the device you want to talk to, get it's address as a number and then convert it into a string and in corporate it into the string you pass.

After that you need to specify the endpoint, that is the point in the USB device you want to talk to. Endpoint zero is always present and is reserved for status and control information, actual data is transferred through other endpoints. Finally you need to specify the speed of the device, in this case "low" but it could have been "high". There are other parameters you need to specify when transferring data but that's all you need for standard messages.

Now you need to use the file handle to actually initiate the message by using something like:

```
SYS"DeviceFS_CallDevice",1<<31,"usbd",
g%,req%,ind%,USBdata%,0 TO ,,,i%
```

The 1<<31 is, believe it or not, a friendly way of sending the SYS number a logic one followed by 30 zeros. Next is the filing system name followed by the file handle you opened previously. The variable req% contains the message request numbers in the following format:

Byte 0 bm Request type
Byte 1 b Request
Byte 2,3 w Value for any number you

want to send with the message.

Next ind% contains:

Byte 0,1 The value of wIndex
Byte 2,3 The value of wLength

Then USBdata% points to a buffer where the returned data is to be stored, and finally the last byte is zero for reasons we need not delve into here.

The value returned in the variable i% indicates if the command was successful, a failure or the device timed out. However you are not out of the woods yet because you don't know what some of these bytes mean, so let's delve into that.

Request type is the byte that defines the direction of the data flow, the type of request, and its recipient. This is defined by the bits in the byte such that:

Bit 7: Direction 0 = host or computer to device; 1 = device to host

Bits 6,5: Request type 00 = One of the eleven standard requests; 01 = a request specifically for the USB device's class; 10 = a request specific to that device only; and 11 is not used.

Bits 4 - 0 are the Recipient bits that define whether the request is directed to:

0000 = The device
0001 = A specific interface
0010 = An endpoint
0011 = Another element in the device

Now bRequest is the actual number of the request, and its interpretation depends on the actual value of the bmRequest type bits:

00 then this contains one of the standard requests.

01 then this is a defined message for the devices class

10 then this is a vendor specific message unique to this particular device.

wValue is two bytes that the host may use to pass information to the device. Each request may define its meaning in its own way. For example sometimes it is used to pass an address to a device.

wIndex is two bytes that the host may use to pass information to the device. A typical use is to pass an index or offset such as an interface or endpoint number but again each message uses this byte differently.

wIndex is two bytes that the host may use to pass information to the device.

wLength is two bytes containing the number of data bytes in the data stage that follows, in other words the maximum length of data that is passed back to the calling program.

And that's all there is ... to this part. You can see there is a lot to get to grips with here. Next month more details of what you need to do to successfully talk to a USB device.

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Operating System review

We continue our comparison between the facilities offered by the two different operating systems with a look at the different types of utility available whether built-in or add-ons, free or otherwise.

Windows provides a document history (Start->Documents) which will allow recent documents to be reloaded. This works well enough although I failed to locate it on a version of Windows XP, this new version may look prettier but I didn't feel it was really much easier to use.

On RISC OS we have the free software "Director" which provides this facility, but it does an awful lot more. There are other applications that also achieve this but they tend to be more limited.

Backwards compatibility

Windows is designed to be 'backwards' compatible in that a Windows 3, or even a DOS program should run on current versions of Windows. In practice, I have experienced problems with setting up certain DOS applications to run on Windows NT.

RISC OS usually includes some 'BBC Micro' emulators: !65Host and !65Tube. Both applications can run BBC Micro programs like View and ViewSheet, provided you have legal copies of the ROM images. The standard emulators don't run every BBC Micro program and Game, but Warm Silence Software's !6502Em apparently does.

In native BBC Basic V mode, Acorn machines can run straight BBC Basic programs (providing there's no assembly language parts). The ARM chip runs it's BBC Basic V a heck of a lot faster than the Beeb's BBC Basic II, I ran the good old 'Biorhythms' program (transferred from tape via disc), and it took a couple of seconds to run, rather than a couple of minutes (after loading) on the Beeb.

Environment variables

In Windows "environment variables" can be setup by right-clicking 'My Computer', selecting 'properties' and then 'Environment' tab. Alternatively, these can be set up by use of the Set command, for example SET variablename=string These variables can then be used in a Batch program, or elsewhere in Windows 'delimited' by % symbols, eg %EnvironmentVariable%. To recall the 'set' variables in DOS prompt, the SET command can be used with no parameters, or with just the variable name.

In RISC OS a similar feature is available. If you look into an application directory and Shift+click on a !Boot or !Run file, you will see a line like:

Set Application$Dir = <Obey$Dir>

This sets up the local variable Application$Dir to be equal to the directory from which the Obey file has been run - i.e. this application directory. Any further references to the directory will use <Application$Dir> (equivalent to Windows' %variable%), and this can be used in BASIC programs within the application, or indeed elsewhere in RISC OS, providing the application has been 'seen' by the filer (and hence the variable has been set up). For example, to run the application, the following command could be used:

*Filer_run <Application$Dir>.!Run

In addition to the SET command, RISC OS has the SHOW command, that echoes the value of a variable. It is equivalent to Windows SET command – without parameters or just the variable name, e.g to show all file aliases known by the system:

show Alias

However, the RISC OS system variable is much more versatile, you can even write code variables that run a short piece of code each time they are accessed. It is possible to create a code variable that generates a unique string based on the current date each time it is used.

System variables are part of the overall command line world of RISC OS, while too deep to go into here it allows completely new * commands to be built up using built-on commands and new ones programmed into library files. One way of running a program only if it exists would be:

```
IfThere [file object] Then
Filer_Run [file object]
```

However with a little time and effort, use of Obey files and so on you can end up with:

```
RunIfThere [file object]
```

Or, to run the !boot file of every application in a directory (if it's there):

```
BootDir [directory name]
```

It is a very versatile system.

Shortcuts / Batch programs

Windows relies very heavily on the use of shortcuts, which are relatively easy to set up. These links often have an extension of LNK. Links can also be created for DOS batch programs to run one or more programs.

Shortcuts can also be created in RISC OS but they are not built-in. You simply create an Obey file which uses the Run or Filer_Run command. With an obey file you need to understand what you are doing however you are not restricted to just running one application, an Obey file can have as many lines and commands as you like.

Bugs

Bugs? Windows is full of them! One of the most irritating issues I've experienced with all new Windows systems, from Windows 95 to Windows NT is an auto-scroll problem. Somehow Windows seems to lock down the shift key or simply scroll down more pages than you want.

Another one is where you click on a button, which 'depresses' beautifully, but does nothing, so you have to click a second time (also true in Mac OS, all versions). Sometimes programs will report an error the first time they are run, but the second time run OK.

There have been major security issues with every release of Windows when it comes to the Internet requiring the release of upgrade patches to handle them.

It would be unfair to say that RISC OS doesn't experience problems, but on the whole the only problems I've experienced in RISC OS are with third-party free software. As far as the operating system goes, I personally haven't noticed any major problems, unlike in Windows.

GUI standards

Microsoft set their own standards and then ignore them. For example F3 on Windows brings up a find file dialogue. F3 in MS Word will bring up a find word dialogue. To find a string in Notepad you need to press Alt-S! However to find again, you press F3.

Over time there has been a gradual coalescing of style in major applications but every version tends to look different from all previous versions and behave differently. One thing you can be sure of is that Word

Selecting items and files in Windows Explorer and RISC OS Filer Windows

Description	Windows	RISC OS
Select first file	Click	Select-Click (left hand button)
Select more files	Shift+Click	Adjust-Click for each file
De-select files	Shift-Click	Adjust-Click
Select all	Control+A	Menu-Click - choose 'Select All'
Select by dragging	Drag a box, selects all files in rectangular area	Drag a box, selects all files under drag box
Invert selection	Can't.	Drag a box, selection state of files under drag box is inverted

will decide what you should be doing and will do its best to prevent you from doing what you want.

Also every manufacturer and programmer would like to dictate its/his/her own style. Consistency of user interface is limited.

Acorn tried to regiment standards through use of the RISC OS 'style guide' which specifies how Acorn's windows should look and feel; Acorn and third party programmers do seem to have adhered to these standards on the whole.

Mac OS has been quite rigid in its standards though it is seriously hampered by the single mouse button nowadays (mouse+key and keyboard+key combinations in major programs are dazzlingly complicated).

Spelling

Most software incorrectly spells words as far as we are concerned because they are in American English. Because of the extreme prevalence of PCs, so our language has started to get polluted with American English spellings. How often have you seen the word 'color' appear where 'colour' should have been written?

Most Acorn software is all spelt brilliantly, in UK English (not the language the Americans call by the same name). Can someone tell them there are two 'l's in 'cancelled'?

Manuals

No manuals seem to be supplied as standard. However lots and lots of third party books are available on various aspects of Windows systems.

Like PCs 'standard' RISC OS manuals have got thinner and thinner as time has progressed and machines have got more complicated. With my A3010 (the only Archimedes series machine I've ever bought new, and my first WIMP Acorn), I received an excellent tutorial guide (or was it an audio cassette tape?) telling me how to use the WIMP, Draw, Paint and so on.

I'm not sure what is supplied with modern machines, but this was excellent. The programmer's Reference Manual is a substantial and worthwhile tome for the programmer and a reasonable buy now you can get it in CD form.

Speed

Windows machines still seem to be woefully slow despite 'technological' advances in chips and 'improvements' in software development, leading to Acorn users re-spelling the name to be Windoze.

The so-called 2GHz machines are not really that fast throughout the machine and considering how much a PC has to use the hard disc their speed is limited by hard disc access times.

Bloated hardware doing things that it does not need to do, limited register space (in the main processor) all these things conspire to make the continual drive for faster processor speeds essential to keep up with software bloat absorbing the extra power provided in the last processor.

RISC OS in comparison is very fast, its software seems far more logically and intuitively written, leading to users becoming proficient in its use in a very short time. Thanks to its RISC technology, Acorn machines are much more responsive than PCs (even without the technicality known as multi-threading).

Desktop background

Both Windows and RISC OS have facilities for displaying a picture at the back of your 'desktop' to which icons can be attached. In windows you right-click on the backdrop (away from any icon) and change your 'wallpaper' setting under the backdrop 'tab' to the relevant file from right clicking on Properties, whilst on the backdrop.

To add a backdrop picture under RISC OS, drag and drop an icon from a Filer window onto a part of the desktop away from any icons and windows. Menu-click the icon and select Make Backdrop. Centred and Tiled options are the same as their equivalents in Windows; "Scaled"

There is an additional RISC OS option that allows you to force the picture to fill the whole of your monitor, small pictures will look very 'blocky' on a high-resolution screen. The 'background' to the desktop (and the icons on it) on RISC OS is called the 'Pinboard'. Icons can also be placed on the 'pinboard' by dragging and dropping onto it. RISC OS allows you the facility to save this as a "Pinboard" (Obey type) file which can be edited.

Once, you're happy with the settings on your background, you can save them as a desktop boot file which can be used for you to reboot the system to exactly the same state it was at prior to saving the file.

Screen Saver

The vast volumes of screen savers available for the PC far outweigh anything available for the Acorn. However they have their disadvantages, the silliest thing I ever saw was when someone was trying to run a hard disc de-fragmentation program.

This program took some time to run so every five minutes or so the screensaver would kick in. Because of the nature of PCs this would result in a "write" to the hard disc. The de-fragmenter would detect this and put a message on the screen, cancelling the screensaver. The de-fragmenter would then start again trying to sort out the hard disc ... five minutes later the screensaver would kick in.

On standard, pre-RISC OS 4 machines you only had a simple screen blanker although there are plenty of free screen-savers available. From RISC OS 4 (Select) you can have real screensavers.

The Delirium screen savers featured in May 2002's Acorn User are a damn sight smoother and more professional looking than a PC screen saver, even on a 600x800 resolution monitor.

Help

Windows provides help by selecting Start->Help or pressing F1 or clicking the appropriate icon on the window you are working in.

RISC OS provides an excellent context sensitive "Interactive Help" system. On the Apps folder, click the !Help application, with the Tourist Information style 'i' icon, and a box appears with text in it describing how to use whatever function is underneath the mouse cursor (providing the software provider has catered for this).

RISC OS also provides a limited command-line help (on a par with DOS HELP command) by typing HELP at the star command line. It's not quite as informative as Window's help. See David Llewelyn's articles in earlier issues of Acorn User for more information.

Usenet computers.acorn.sys.apps and other Acorn related news services on the web should not be discounted. There are a very helpful bunch of Acorn enthusiasts and professionals out there, who in my experience can answer any problem you can hope to pose relating to Acorn software.

Find

Windows includes superb file finding facilities. In a 'DOS' window the following commands can be issued:

DIR /s command (to find files by name),

FIND or FINDSTR (to find files by contents),

or through Windows Find (Start->Find).

RISC OS does have a standard file find facility, choose the directory you wish to search and Menu-click the Dir folder, and go into the Find sub menu and enter the filename to locate (use * as wildcards). There are also many shareware find programs for the Acorn. I use FileFinder shareware by Gerald Hartmann, this combines both searching for filenames, contents, or file type and provides a simple file searching facility (including text in a file) for Acorn machines. (email:office@id-software.co.at). Also try www.AcornSearch.com or www.Vigay.com (Paul Vigay) Web sites for software or information.

Andy Burgess

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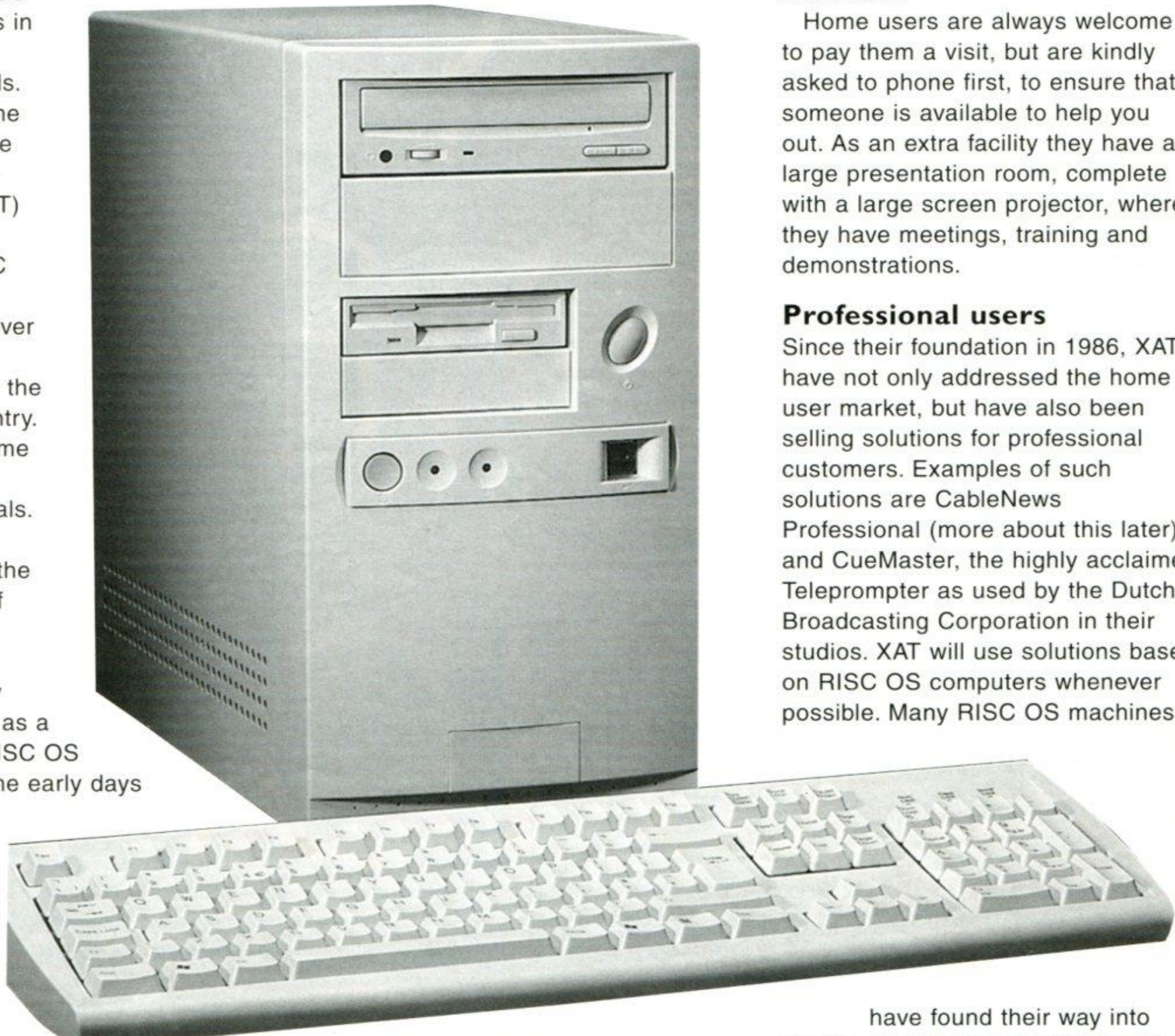
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By X-Ample

RISC OS computers have always been rather popular in The Netherlands. Back in the days when the BBC and Archimedes were the prime choice in schools throughout the UK, the Netherlands was at one time the 2nd largest Acorn market in the world.

Much has changed since, but some have managed to survive. Meet X-Ample Technology: a hardware and software development company, founded in 1986, and currently one of the biggest RISC OS dealers in The Netherlands. Based in the south of the country, X-Ample (XAT) have sold many RISC OS-based solutions over the years throughout the entire country. Both to home users and professionals.

They are located in the outskirts of the city of Oss, from where they started off as a regional RISC OS dealer in the early days of the Archimedes in 1986. As they are on an industrial estate, they have plenty parking space available for anyone visiting their showroom.



Recently, Castle Technology Ltd have appointed XAT as their official distributor for the all new Iyonix PC and both parties seem to be very excited about this. "The increased profile and professionalism of the Iyonix PC will help us to identify and create new markets, that we previously couldn't dream of", says Paul Reuvers, Managing Director of XAT. He refers to the increased speed, graphical performance, memory and storage capability of the new machine. "The Iyonix specifications really fit the demand of today's users and the increased performance makes it ideal for a number of forthcoming products we have in mind".

Home users

Although the majority of RISC OS computers, sold by XAT, find their way into professional businesses, they are still interested in the home user and will support them wherever they can. According to Paul, home users have a completely different view of the market and products, compared to professional users, and a lot can be learned by listening to them both.

And the effect seems to work in both ways: because XAT have professional customers, they have machines in stock and can do their own repairs and service, which of course is a prime to the home user. All available RISC OS computers are shown side-by-side in a modern showroom.

Home users are always welcome to pay them a visit, but are kindly asked to phone first, to ensure that someone is available to help you out. As an extra facility they have a large presentation room, complete with a large screen projector, where they have meetings, training and demonstrations.

Professional users

Since their foundation in 1986, XAT have not only addressed the home user market, but have also been selling solutions for professional customers. Examples of such solutions are CableNews Professional (more about this later) and CueMaster, the highly acclaimed Teleprompter as used by the Dutch Broadcasting Corporation in their studios. XAT will use solutions based on RISC OS computers whenever possible. Many RISC OS machines have found their way into studios and businesses this way in the past and, with the birth of the all new Iyonix PC, the future is looking brighter than ever.

CableNews Professional

An important part of XAT's business consists of CableNews Professional solutions. CNPro is a truly profes-

sional authoring and play back system for running continuous TV carousels, showing both news and adverts. As most homes in The Netherlands have cable TV, most cities run a local, fully remote controlled, news station. Hence the name CABLENews. Over the past years, the market has expanded dramatically and CableNews systems are now also sold for use in buildings, hotels, camping grounds and bus stations. XAT have been able to expand their sales to France and the UK.

Please do not confuse CNPro with CableNews, the presentation package sold be Lingenuity some years ago. Although also developed by XAT, it bears no relationship with CNPro, apart from the name.

RISC OS in Studios

Not many people will know that nearly every TV studio in The Netherlands contains one or more RISC OS machines.

XAT's contribution to the modern TV studio is CueMaster, a fully fledged Teleprompter. "A what?", we hear you ask. A teleprompter is the magic system that displays text in front of a TV camera, using one-way mirrors. That way, the presenter can look straight into the camera, while reading the text. CueMaster is based on an A7000 and has many features not found on any competitive product.

Development

Apart from selling third party RISC OS hardware and software, all of XAT's own products are entirely developed in-house. For this they have a nice little workshop available, fully equipped to develop and repair the most difficult hardware projects. It is packed with measuring equipment, power supplies and computer and there is the comforting smell of solder.

A quick look around the workshop also reveals a stack of Acorn SetTop boxes, which have been converted by XAT into CableNews delivery boxes and now in use in one of the largest banks in The Netherlands. Paul shows us the interior of the STB, which can hardly be recognised. In addition to the motherboard, there is a modem, a teletext unit and even a full size harddisc. And all of this is running RISC OS, of course.

Software development is scattered all over the place and Paul confesses that some of the work is actually done from home. Paul: "A nice side effect of the development of a professional product is that you sometimes have to develop tools and additional modules that may be of use to other users as well".


Iyonix at X-Ample

A number of such products have been released as freeware to encourage other programmers to use it, and we've already covered the universal configuration utility !ConfiX in Acorn User some months ago. "It gives us good feedback from users and helps us to improve the products even further", he adds.

The arrival of the Iyonix PC, has really boosted the development side of things. All existing applications had to be converted in order to run on the 32-bit only platform and some applications are partly depending on other 3rd party developments. So, as you can imagine, there has been intensive contact with a number of other developers in the RISC OS community over the past few months and they've all been very supportive.

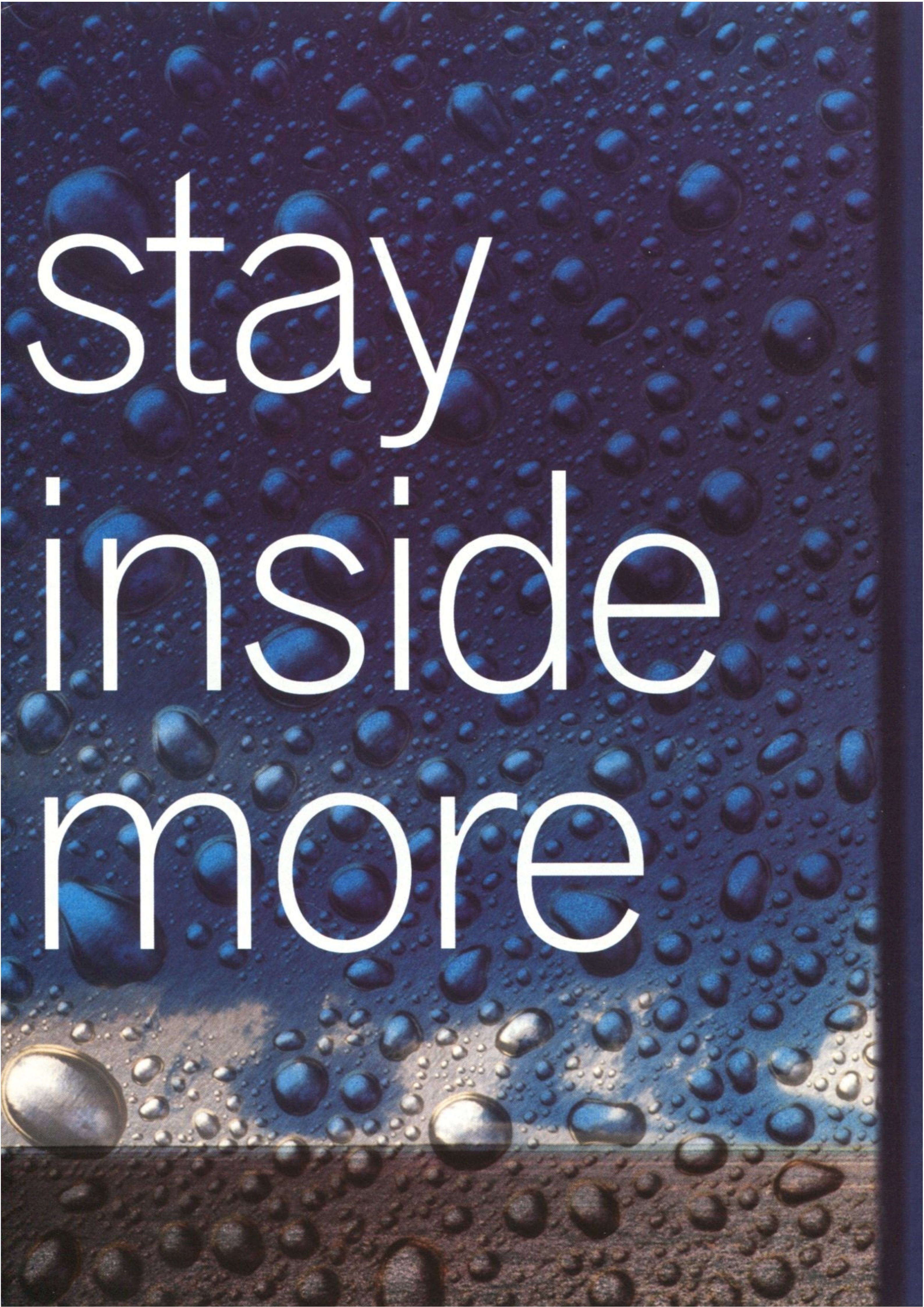
RISC OS future

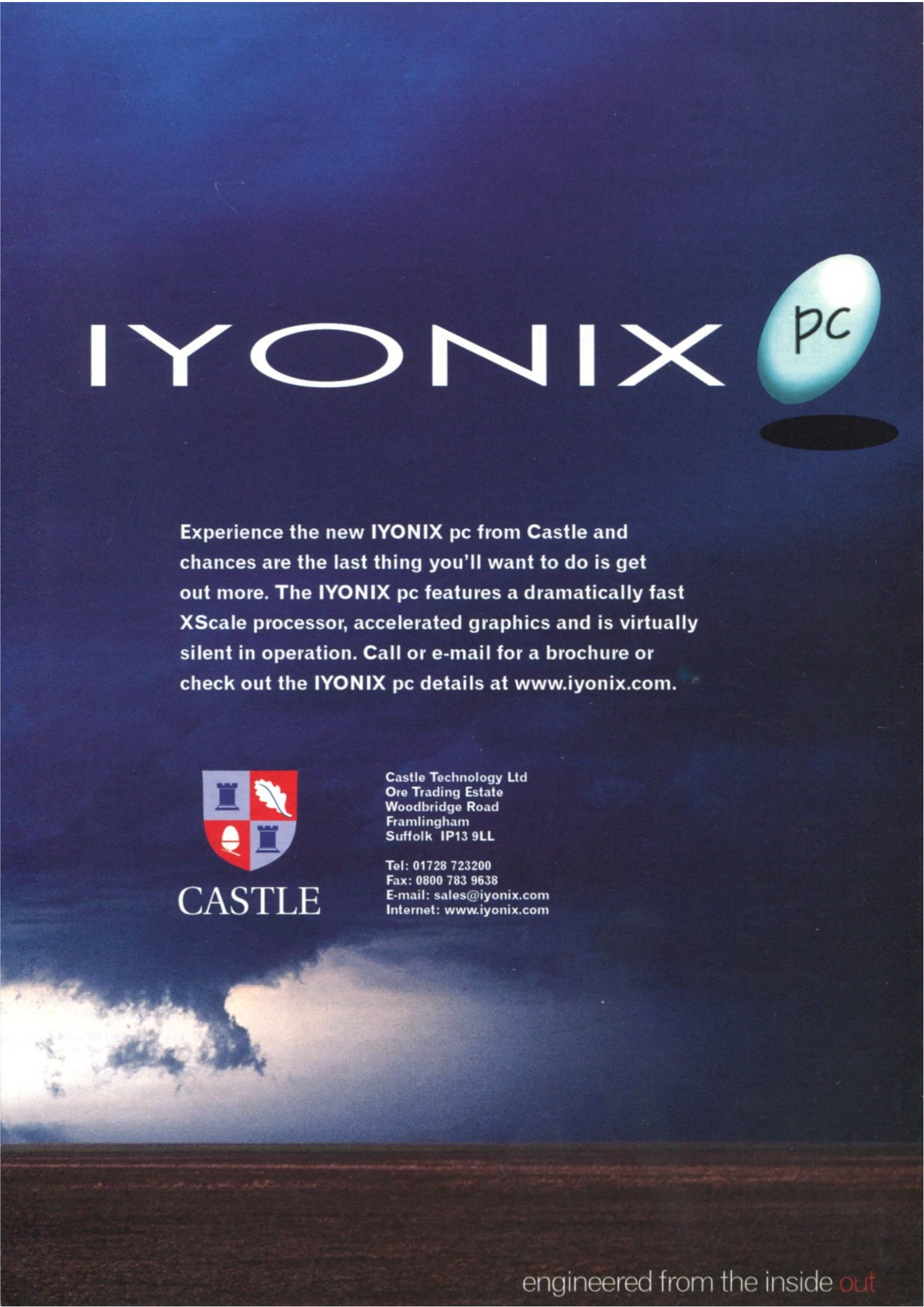
XAT think very highly of RISC OS and they are convinced that it is suitable for a large number of applications. Now and in the future. "The small footprint, the reliability and of course the inclusion of a complete desktop, makes it the ideal solution for many applications, ranging from embedded industrial products to the home desktop user", says Paul.

They are also very excited about the new Iyonix machine which they believe will give the RISC OS market a new impulse. "It is very encouraging to see that new RISC OS machines are being developed and we are impressed by the professional level of support that we've received from Castle so far. We currently have advanced plans for some new and exciting products and Iyonix seems to be the ideal machine to run it on. As far as we're concerned, the Iyonix couldn't have come at a better moment."

At present they don't want to reveal what new plans are ahead of them, but more news is promised over the next few months. We can hardly wait!

Contact: Paul Reuvers
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The Future

It has been easy over the past few years to say that there is no future for the RISC OS market. The entire set-up was in a technological dead-end, with the operating system tied to specific and expensive hardware for its memory and graphics.

There were a lot of justifications put out for not making the necessary changes to the operating system. The two primary ones being that (a) there was no 32-bit software so why bother? And (b) there was no demand. The real reason was that it would take a lot of money to employ all the programmers needed to take away the hardware dependency and convert a lot of handwritten machine code to 32-bit in a reasonable period of time.

Pace did have a lot of money and they were willing to put resources into the project until circumstances forced them to re-evaluate their ongoing activities and they stopped the work. But by that time there was a 32-bit operating system called RISC OS. And that is very important to all of us.

During this time RISCOS Ltd did make some improvements including long filenames, these changes had already been incorporated back into the Pace source code and then converted to 32-bit.

And, eventually, Castle Technology obtained the necessary licences to use and sell the new version of the operating system with a computer designed and built around it.

So now we have a new computer with all the advantages of modern components (faster bus, faster hard drive, faster processor) and the operating system to run it which is our old favourite user interface but 32-bit under the hood.

Demand? What demand?

Taking the second objection first, is there a demand? Arguably no, did anyone really care whether a new RISC OS computer was 32-bit? Probably not really. What people did care about was that there had been no new computer for years; that there had been plenty of promises (including those of Acorn) and none of them fulfilled for one reason or another.

Broken promises do not inspire confidence. I am not attaching blame to anyone, that is not the point. It is simply the fact that if you don't deliver what you promise then people, at best, become disheartened and at worst they leave the market completely. Broken promises are seriously counter-productive regardless of whether intended or not.

So there is a demand, for something, anything, as long as it is real and better.

And since the recent Midland Show the proof that the demand was absolutely real has been proved with the excellent sales in the new machine.

Software? What software?

The first objection, software, is important. You may have gathered from all the information being pumped out that 26-bit software is extremely (make that an almost certainty) unlikely to work on the new machine unless it is written in BASIC.

But strangely enough the majority of programmers are extremely happy to (a) spend some money to get hold of the latest tools, and (b) to make the necessary changes in order to ensure that their software works on the Iyonix. In fact they have been almost falling over themselves to get

is Waiting

hold of the C/C++ compiler and the necessary information for it to work.

So there is absolutely no problem getting existing software that is going to work.

Except, and this is a big exception, for software that is no longer supported, and there are some very significant programs that fall into that category, like Impression and Sibelius.

Does that mean then that anyone who uses Impression extensively won't be able to do it on the new computer, that they will have to convert to Easi/TechWriter or Ovation Pro?

Leaving aside the argument that perhaps they should upgrade to one or other of those applications there is one saving grace. Neil Spellings of Spellings Computer Services has, for a while, very quietly, been working (with his programmer) on an emulator system that would run RISC OS. It was written in C so should have been relatively easy to convert to any platform. And it was heading towards completion when the Iyonix was announced.

It was a simple matter indeed to convert the application to run on a RISC OS computer and have it compiled to run in 32-bit mode. The end result of this is an application that allows 26-bit software to run on the 32-bit systems. And it will run Impression and hopefully will soon run Sibelius.

So the other argument is handled, there is almost no software that will not run on the new computer.

Future thoughts

I described the previous situation with RISC OS as being a dead end, this was an apt description. Without these changes to the operating system the development of RISC OS was at a complete stop, dead stop.

The Microdigital Omega presented a potential hope and we were quite enthusiastic at the time. Theoretically it should have provided a way out of the dead end by creating a machine that temporarily side-stepped the 32-bit problem and provided a machine people could work with while generating revenue to allow further development that would finally breakthrough.

But it hasn't appeared and became one of the broken promises, unintentionally and very unfortunately. It may still appear and provide an alternative to the Iyonix. In the commercial world competition is a valuable thing.

The licensing of RISC OS 5 opens the door to a whole new world of opportunity. The Iyonix is not the end, nor are future designs limited to being based on the Iyonix design. With this development it becomes so much easier to create new machines along the variety of lines as the Windows PC.

Who cares what graphics card you have plugged into the machine? What does it matter whether the processor is an Intel XScale ARM processor, or some other company's ARM processor? It doesn't have to have podules or serial ports or parallel ports or any of these items. The operating system can now cope, you can have your ARM-based palmtop, or laptop, or ultra-powerful desktop machine.

And you can have them with the operating system that you like to run, the one that is easy to use and productive, the operating system that doesn't get in the way of your productivity: RISC OS.

Steve Turnbull
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Internet services: what is right for you?

When a company or organisation decides they need Internet connectivity, there are many factors that need consideration when deciding what level of presence is needed.

In this article I will be looking at some of these factors and asking the kind of questions that companies or organisations should be thinking about when they decide on what "Internet presence" or services they require before spending their money or possibly signing contracts.

Many of your decisions will be based upon two main factors: the size of your organisation and the budget available to you. While getting fully "online" may seem a daunting and expensive task, this isn't necessarily the case. All the situations and technologies I will be discussing are equally relevant whether you are a small business, charity, organisation, school or educational establishment.

Requirements

Before you start shopping around for companies, make sure you have a clear idea of what you actually want. Your shopping list could include:

- Internet access for all staff
- E-mail addresses for all staff
- A company Web site
- A company FTP site
- Internal company e-mail

Some solutions I will be discussing will be able to provide all of the above, while others may only provide a few.

Connection types

There are many way of connecting to the Internet. The one you choose will be determined by one of the following factors:

Company size

The number of employees will have a large impact on the services you choose. A solution that is ideal for 5 employees would not work for 500.

Availability of services in your area

Many of the higher-speed Internet connections like broadband, ADSL or dedicated links depend on the availability of such services in your local area. For cable broadband, you need a local cable TV/Internet provider in your street, for ADSL you need to be a certain distance from your local exchange, plus that exchange has to be ADSL-enabled.

Budget

You may have to trade-off features and speed against the budget you have available. Everyone would like a fast, reliable Internet link, but to provide that for all your employees may not be possible within a sensible budget.

Shopping list

Depending on the services you require for your organisation, this will affect the type of service you opt for. Some services that you may need may not be available in certain areas, or using certain connection types or providers.

So let's look at the various types of Internet connection widely available, and look at the pros and cons of each kind.

Shared dial-up

For very small companies (1-5 PCs) that need occasional access to send and receive Internet e-mail only, having a single PC with a modem is probably the cheapest solution. If the computers are on an internal network, you can use that PC as a basic Internet gateway that allows the other PCs to access the Internet through that PC.

Individual dial-up

Another possibility, especially if the computers you are using aren't on an internal network, is to have a modem on each PC, and share a single telephone line. The disadvantage of this solution is that it would require more time to setup and configure every single PC, and could cause problems if you are sharing a single telephone line as one PC could disconnect another PC already connected. Having a separate phone line for each computer would solve that, but would cost a lot more in line rental.

Both dial-up solutions have the advantage that if you utilise one of the free ISP's such as AAUG Online, there are no monthly or setup fees, and you are only paying for your telephone calls. Alternatively, you could sign up to one of the fixed-fee packages which give you unlimited time online and no call charges for a fixed monthly fee (usually around £15 per month). There is also no additional equipment required other than an analogue modem and telephone line.

The downside of a dial-up connection is of course capacity and speed. If you have a lot of data to transfer, then you could spend more time waiting for them to download than you would actually do working on them once you have received them. Also, sharing a dial-up connection between any more than about three people just makes downloads too slow to be usable.

Another disadvantage is that you have to initiate the connection manually to send and receive email, which means an urgent e-mail could sit waiting on your mail server for several hours before you next connect and download it. The faster you can respond to an e-mail, the better impression and efficiency you can offer your customers.

ADSL/Broadband

This is probably the most popular method for obtaining a fast and relatively inexpensive connection to the Internet. Broadband also has the advantage that it is "always on" so does not rely on you initiating the connection which is ideal in an office environment when you want instant notification and delivery of e-mail to provide the best response to your customers.

Basic 512Kbit/sec broadband can now be obtained for as little as £25 per month, and in many areas, 1Mbit and 2Mbit connections are also available. The main limitation of broadband is that it relies heavily on local infrastructure being available, whereas dial-up connections can be used wherever there is a phone line.

ADSL for example requires that you are within 5km of your local telephone exchange, and also that the equipment at that exchange has been upgraded to handle ADSL connections. Most of the main UK urban exchanges are now ADSL-capable, but many more rural

exchanges are still not capable of handling ADSL connections.

In the UK, BT do offer a service where if your local exchange isn't ADSL capable, you can register your "intent" to purchase ADSL, and if there is sufficient other local interest, they will upgrade that exchange to be ADSL capable.

Similarly with Cable broadband you require a local cable operator who has "wired" your street for cable TV and Internet. Two of the more popular providers in the UK are NTL and Telewest, who both offer 512Mbit/sec and 1Mbit/sec cable broadband services.

One of the limitations of ADSL and broadband for RISC OS users was that to use it you have to have DHCP support. Fortunately, later versions of RISC OS Select, and RISC OS 5 both now include DHCP support which means you can obtain the IP address your PC needs to communicate on the Internet dynamically from the broadband service.

For both dial-up and broadband connections, you probably wouldn't want to host any Internet facilities such as e-mail, web or FTP servers at your local site. ADSL and Cable connections often offer no "service level" agreements to the amount of downtime that is acceptable, unless you opt for some of the more highly-priced business packages which include a service agreement and a higher level of support. There are more aspects to consider when deciding on where to place your web or e-mail server which will be discussed later on.

Dedicated link / leased line

There are two main drivers for obtaining your own, dedicated link to the Internet. Firstly, if you wish to provide Internet access to your organisation and you have a large number of PCs (25+) you will probably need a capacity greater than offered by the other connection methods such as ADSL or dial-up. In such a case, the capacity of the link you need will be determined by the number of PCs you wish to connect, and the speed that you wish to offer your users.

The second driver is if you wish to host an e-mail, Web or FTP server on your own premises as opposed to using an external hosting company. This link will then be used for both incoming connections for incoming e-mail and people accessing your web or FTP site; and outgoing connections from your employees sending e-mail, accessing the Internet and browsing other Web sites. In this case, the capacity of link you require would also need to take into account the amount of incoming internet traffic, such as e-mail volume and the number of visitors to your Web site.

In both cases, the cost of dedicated links increase as you increase the capacity. As an approximate guide to the cost, a 1Mbit/sec dedicated link could cost £500 per month, as opposed to £30 per month for a 512Mbit/sec broadband or ADSL link. The reason a dedicated link costs so much more is that it often involves hosting telecoms equipment such as a router at your premises, and these costs also includes management and support of that equipment which can be expensive.

However, dedicated or leased lines also offer greater support offerings that ADSL or cable connections, and may also offer a service level agreement (SLA) that guarantees a percentage uptime or availability, with compensation payable if that isn't met. Such agreements are essential if losing your Internet link could cripple your company Web site and e-mail systems in one go.

Dedicated links are available in a wide range of speeds. The most commonly available speeds are: 64Kbps, 128Kbps, 256Kbps, 512Kbps, 2Mbps, 4Mbps, 8Mbps, 34Mbps, 45Mbps, and 155Mbps.

Available Services

In addition to providing actual Internet access, there are a number of Internet services that you may wish to take advantage of. These are:

E-mail - The most common use of an Internet connection is to provide Internet e-mail to your employees. This allows your employees to communicate easily with the outside world from their own PCs. There are two possible types of e-mail solutions: Remote POP3 or local server.

Remote POP

This is the most common e-mail solution for individuals or smaller organisations. POP3 e-mail involves setting up a mailbox on the ISP's mail server that all your e-mail is delivered into. You then access this mailbox remotely using your Internet software over your chosen Internet link. Software such as POPstar under RISC OS, or Pegasus Mail or Microsoft Outlook under Windows can download e-mail from the POP3 mailbox.

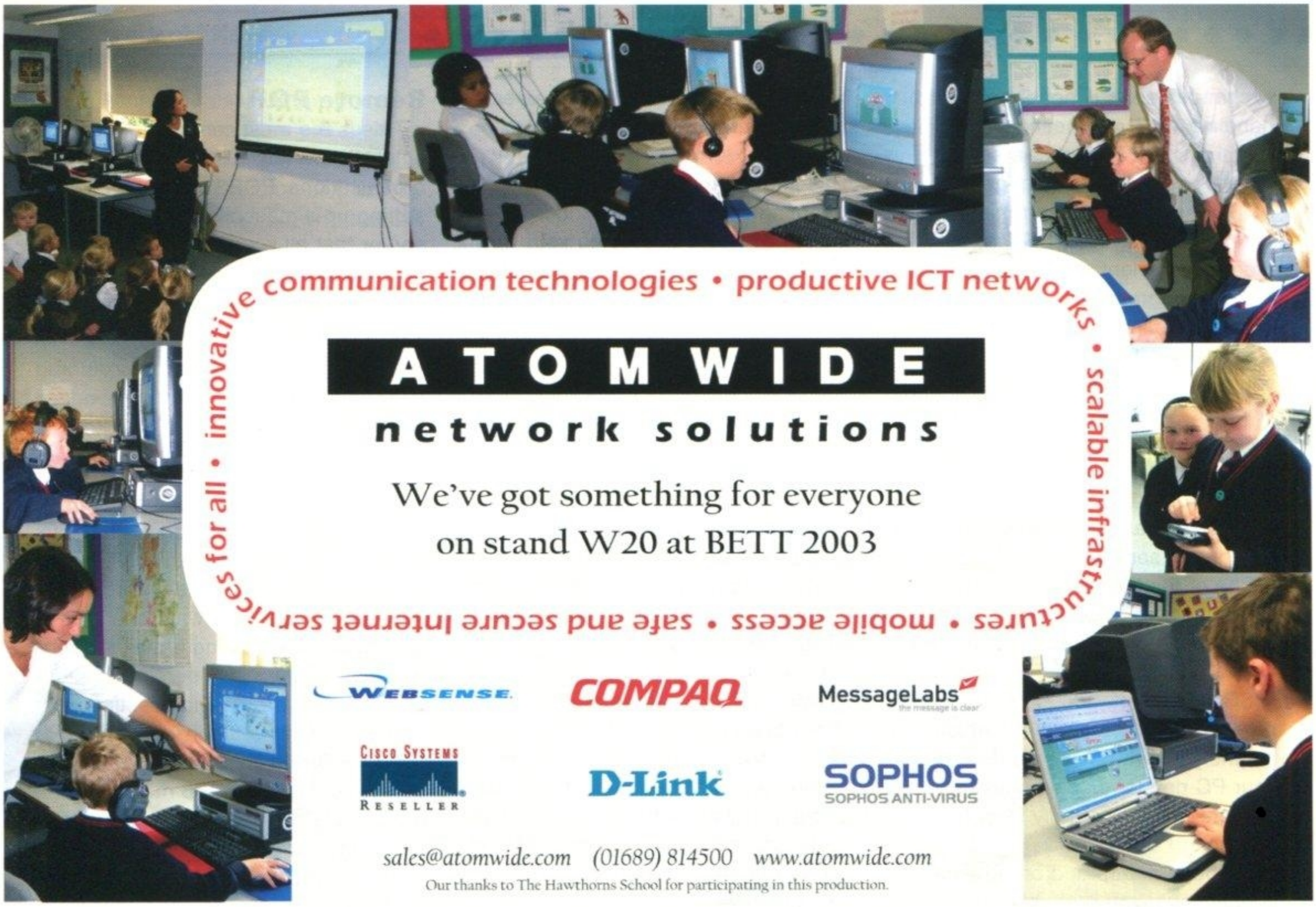
The limitation of a POP3 mailbox is that all e-mail is bundled together into a single mailbox. While this is fine for individual use, if you are an organisation then you don't want one employee downloading e-mail for the entire company; each person should only download the e-mail destined for them only. One solution would be to have a POP3 mailbox for each person, but given POP3 mailboxes are usually chargeable items, if you have many employees this solution could get very expensive.

Local server

The most common solution for larger organisations is to set up an Internet e-mail server internal to your company. This could be a single PC running some e-mail server software (such as R-Comp's Messenger Pro Server edition for RISC OS, or Microsoft Exchange for Windows-based systems). This computer would then download all the e-mail for all employees, and sort them into the correct mailboxes. Individuals in the company would then connect to this computer, instead of the remote POP mailbox to collect any e-mail addressed to them.

Another advantage of an internal server is that it allows internal e-mail ‹ you can send an e-mail to another employee (or everyone in the company if you wish) without the e-mail ever having to leave the building and travel over the Internet.

The method that e-mail would be delivered to your e-mail server would depend on what Internet connection you had. If you have a permanent, fast connection to the Internet, then you would ask your ISP or domain registrar to specify that the machine



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that you use for e-mail to be specified as the MX record for your domain (MX stands for Mail eXchange). This means that e-mail gets delivered directly to that PC from other mail servers on the Internet with no need for a remote mailbox. For a more resilient solution, you should have a backup machine also able to handle e-mail permanently connected just in case the first one was to go down you will still be able to send and receive e-mail.

If you don't have a permanent link available, you can't have e-mail delivered directly to your local server, as it will be unavailable whenever your link isn't connected. Any e-mail trying to be delivered during this time will get bounced back to the sender. In this case, you would have a remote POP mailbox that would be used to temporarily store all your e-mail until you next connect to the Internet then the local server would download all the e-mail from that mailbox into the designated mailboxes of your local users.

Web

Another service that you could provide is a Web site for your organisation. Again, the method you would chose to use to provide this will depend on the kind of Internet link you decide upon and your available budget.

If you are buying a fast, expensive leased line to give all your employees Internet access and Internet e-mail, you could also host your own Web site at your premises. This would save the expense of paying an external hosting company, and also allow more advanced interaction between your Web site and Internet company computers and servers. For example, if you want to run an e-commerce site which displays items for sale, hosting the Web server internally would allow a real-time display on your Web site of the number of items in stock in your warehouse.

The disadvantage of hosting your site on your premises is that you will need a server capable of serving your Web site to possibly many 1000s of visitors. Such hardware doesn't come cheap, and usually needs special environmental conditions like air conditioning and dehumidifiers. Also, such a server should be on an Uninterruptible Power Supply (UPS) so that if your office was to suffer a power outage, your Web server (and thus your Web site) could continue running. Also having your own server often requires someone with knowledge of how to run and maintain it, which could mean employing an internal resource just to look after your Web site.

Another alternative and much more popular option is to use a Web hosting company with a server located in a central data centre in their own premises. I have discussed the types of Web hosting in a previous feature, so refer back a few months for more details on the types of hosting packages available. Because of the complexities of having your own server in-house, the majority of organisations opt for this remotely managed service to reduce their internal support burden and costs.

FTP / File upload

If your organisation has the requirement to accept files from customers or clients, you will probably want some kind of FTP or file transfer facility. For example, a print or design house will need to be able to accept copy electronically so will need to provide that facility for their customers. Traditionally, electronic file transfer has been provided by ISDN, with a computer with an ISDN modem being used to accept incoming calls from clients. This use is now much deprecated having been replaced with the Internet, plus ISDN is slowly being replaced with ADSL and broadband Internet access.

An FTP solution will give your clients the ability to upload files from any location, without having to have access to an ISDN telephone line. It also means that you yourself can access these files from any Internet-connected computer, which is ideal if you work away from the office a lot and need access to these files remotely.

Whether you host your FTP solution remotely, (on a hosting company's server) or on a server at your premises largely depends on the other Internet services you wish to provide such as e-mail and Web. One factor that may influence your choice is the size and number of files that are getting uploaded.

If your FTP server is remote, (is provided by a hosting company at their premises) and the files your clients are uploading are very large or numerous, it may take some time for you to download these files to your local computers for processing. This is especially true if you only have a dial-up Internet connection, as this kind of connection can only manage approx 10Mb per hour over the standard phone line. If you opt for the FTP service being hosted on a server at your premises, then the files are instantly available on your local network, and there is no downloading to be done to access them.

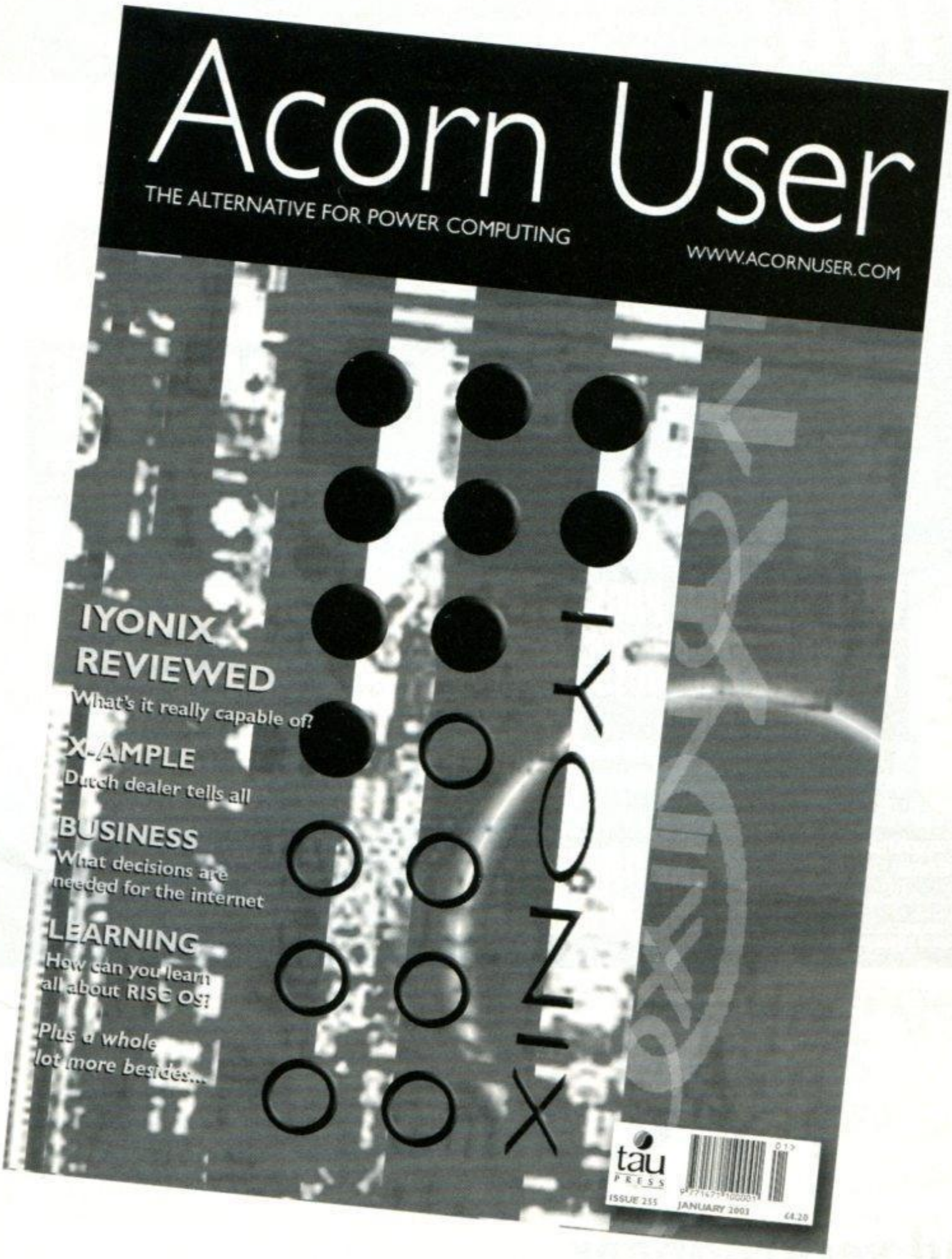
Conclusion

As we have seen, there are many possible variations available for getting your organisation online. Hopefully I have given you an idea of the possibilities available to you, and the questions you need to ask yourself before embarking on any project to provide Internet access to your employees or Internet services to your company.

Useful links

www.spellings.net
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www.letsallgeton.gov.uk
www.ukonlineforbusiness.gov.uk
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Neil Spellings is director of Spellings.net, a Web design and hosting company.



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Part 12: Tracking media

After a short break with the amazing Iyonix news we are back in style with this new episode in the daily life of database programming folk. Last time we went over how we

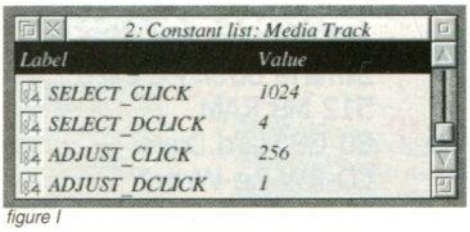
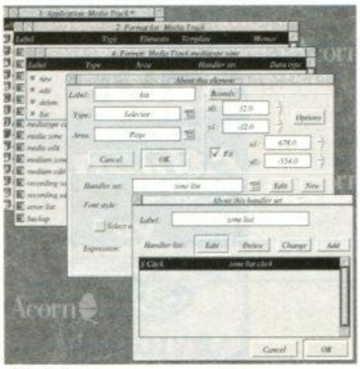


figure I

prevent deletion of certain types of record from other parts of the application. All done in a nicely general way.

I did say that this time we would be looking at the "medium" object but I lied. As I was developing the next part of the


figure II

program a few issues cropped up which we will look at in considerable detail.

However the first of these items is purely a user interface issue. If you have tried out any of the sample programs, in the downloads part of **www.acornuser.com**, you may have added some records. But to edit any one of them you must select the record in the list and then click the Edit button. What a terrible waste of time, moving from one place to the other.

What we need is the ability to double-click on the name of the record in the list and just have the edit window pop-up with the correct record details in it. Is this easy to do? Yes it is.

We have a few things to set up: using a little experimentation involving the insertion of a command "print @clickmouse" in the click handler for the zone windows I determined the codes returned by this function for different types of click, and they are shown in Figure I. I created constants for each which we can use in the main program.

The next thing is that we have to give the actual selector in the zone window a handler set of its own. Figure II shows how a handler set "zone list" is created and attached to the selector, and inside the handler set we attach a single handler called "zone list click". This will deal with the clicks. This handler set must be attached to all the existing "list" elements in every zone that has been created so far.

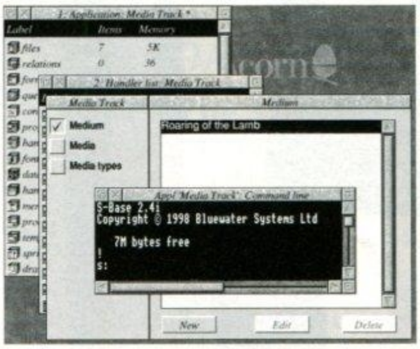

figure IV

Figure III shows my initial code, this was just to prove that it was working before I started to fiddle with the actual code itself, and Figure IV shows the result of a double click. One of the gurus of modern programming, Knuth, has declared that the single most useful debugging tool is the appropriately placed print statement. I'm with him all the way.

The next step is to expand the data structure that holds the information about each zone. The structure zonal has a new field "listh" which is to hold the handle of the list element. Since a selector is really a window overlaid on a parent window it has its own handle, which we may need. (Figure V) We initialise this in the control_init routine (Figure VI) and find out its actual value for each zone created and set it in the control_register_zone routine (Figure VII). Finally we create a new routine which allows us to find out which zone we're in by searching for the list handle (Figure VIII). Now I did all this and then discovered I didn't really need to, however I did keep it in because it might come in useful at a later date, you never know.

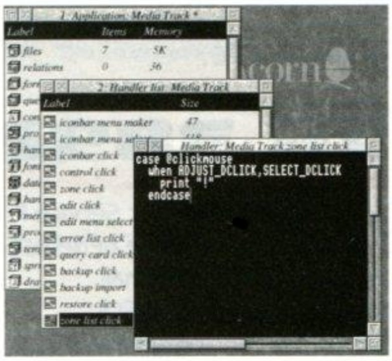
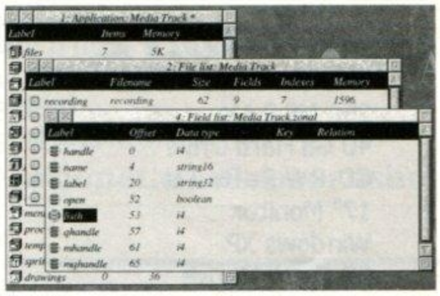


figure III

Figure IX shows the final code for the double-click handler. The first line finds out what zone we are in, you may double-click the selector (which does have its own handle) but the @handle function returns the handle of the main card not the selector, which is sensible. We do a quick check to see that we are in a sensible zone and if not we just exit.

Next we get the name of the zone and the handle of the selector (not actually necessary) and then perform a buttons check. This routine looks at what is currently selected in the list and sets the New, Edit and Delete buttons accordingly. This is needed here, it was previously done in the "zone click" handler but now that we've added this "zone list click" handler it supersedes clicks that would previously have been passed


figure V

through to the other. Single clicks come through here as well so we must deal with everything.

Finally we see whether we've got a



```
def proc control_init
  local zn,zw
  ctrl_handle = NO_HANDLE

  ctrl_curzone = CTRL_ZONE_NONE
  ctrl_showing = FALSE
  ctrl_cmenuzn = CTRL_ZONE_NONE
  ctrl_cmenuzc = CTRL_ZONE_NONE
  ctrl_cmenuzh = NO_HANDLE

  dim z zonal ctrl_zones[CTRL_MAXZONES]
  dim z zwin  ctrl_zwins[CTRL_MAXZONES][CTRL_MAXZWINS]

  for zn=0 to CTRL_MAXZONES-1
    ctrl_zones[zn].handle   = NO_HANDLE
    ctrl_zones[zn].name     = "zone "+@str(zn)
    ctrl_zones[zn].label    = "Dummy "+@str(zn)
    ctrl_zones[zn].open     = FALSE
    ctrl_zones[zn].listh    = NO_HANDLE
    ctrl_zones[zn].qhandle  = NO_HANDLE
    ctrl_zones[zn].mhandle  = NO_HANDLE
    ctrl_zones[zn].mqhandle = NO_HANDLE
    for zw=0 to CTRL_MAXZWINS-1
      ctrl_zwins[zn][zw].handle = NO_HANDLE
      ctrl_zwins[zn][zw].open   = FALSE
      next
    next

  return TRUE
enddef
```

figure VI

double-click and if so we do something very clever: The "card select element" command emulates a click on the specified window and element. In this case the command pretends we've just clicked the Edit button, which initiates the

```
def proc control_register_zone(zs,zt)
  local zh=0,zn="",qh=0,mh=0
  ctrl_curzone+=1
  card new zh,@tolower(zs+" zone")
  card set header zh,@trim proc toupperfirst(zt)

  zn=@trim @tolower(zs)
  ctrl_zones[ctrl_curzone].handle  = zh
  ctrl_zones[ctrl_curzone].name    = zn
  ctrl_zones[ctrl_curzone].label   = @trim proc toupperfirst(zt)
  ctrl_zones[ctrl_curzone].open    = FALSE
  ctrl_zones[ctrl_curzone].listh   = @elementhandle(zh,"list")

  query new qh,(zn+" list")
  ctrl_zones[ctrl_curzone].qhandle = qh

  menu new mh,zn,ctrl_zones[ctrl_curzone].label
  ctrl_zones[ctrl_curzone].mhandle = mh

  query new mqh,(zn+" menu")
  ctrl_zones[ctrl_curzone].mqhandle = mqh

  @exec("proc "+@trim ctrl_zones[ctrl_curzone].name+"_zoneprep(zh,qh,mh,mqh)")

  return ctrl_curzone
enddef
```

figure VII

edit process and brings up the edit card for the record we've just double-clicked.

Why do it this way? Why not just put in the code that starts the record edit? Because at some point in the future we might make some changes and have to alter the code that starts the edit. If we have two versions of the code, one in

```
def proc control_find_zone_listh(h)
  local z,n=CTRL_ZONE_NONE
  ffor z=0 to ctrl_curzone
    if (ctrl_zones[z].listh=h)
       n=z
       break
     endif
    next
  return n
enddef
```

figure VIII

"zone click" and one in "zone list click" then we have to remember to alter both. This method means that we only have the code once and only one set of changes will need to be made. Much safer.

Categories

Next up we are completely arbitrarily creating a new object called "category" this is going to be our catch-all way of

```
curzone = proc control_find_zone(@handle)
if (curzone=CTRL_ZONE_NONE) then return

local zname = proc control_getzone_name(curzone)
local listh = proc control_getzone_listh(curzone)

@exec("proc "+zname+"_zonebtns(@handle)")

case @clickmouse
  when ADJUST_DCLICK,SELECT_DCLICK
    card select element @handle,"edit"
  endcase
```

figure IX

including data that is going to be different for every type of media.

We will be able to have a category called Actor, and attached to this category we will be able to include the names of actors. We will also have Rating, and be able to have different ratings. We can have Band, and have a whole list of bands.

We will be able to specify, completely arbitrarily, which categories are associated with which recordings and hence can have all the data we want. In principle this will not be too complicated but will take a fair old bit of programming.

Anyway Figures X and XI show the record fields of category and the look of the new record with its sub-categories. I might change this to something more understandable, I'd like to use Entry but that is a reserved word, Instance is another possibility but it's not very intuitive. Apart from the file and the format I also went through and created the various other necessary resources for the creation of a new object and module.

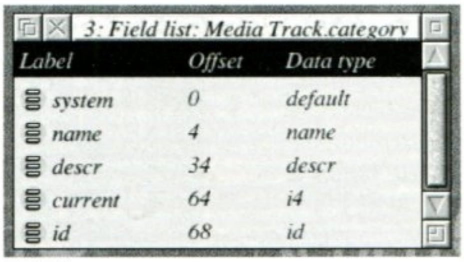


figure X

Now looking at category two things occurred to me: First the control window shouldn't have "Sub-categories" in it, it's going to look tatty and unprofessional. This should be controlled from the Category card which allows me to create and add (via the menu), and to remove sub-categories from categories. But, if I don't have the standard zone, how do I delete? I need an On-card delete button, which you can also see on the card in Figure XI.

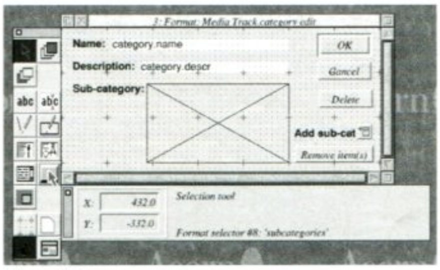


figure XI

So I have two new things to add which will be quite useful in the long run: Invisible modules and on-card deletion. We will look at the latter first.

On-card deletion

The ability to delete a record from the edit card itself becomes a necessity if we have modules that aren't visible and editable by normal means.

```
local znn=@trim(ctrl_zones[curzone].name)

local edit_del
def proc edit_del(n)
  local rn=@bget(qh,n)
  @exec("proc "+znn+"_delete(rn)")
  return FALSE
enddef

case @clickelementlabel
  when "okay"
    ok=TRUE
    card exit poll @handle

  when "cancel","(close)","(scared)"
    ok=FALSE
    card exit poll @handle

  when "delete"
    if (zr=-1)
      ok=FALSE
      card exit poll @handle
    else
      if (proc query_delete("Do you really want to delete this record")=QUERY_
ACTION)
        local sh=@selectedhandle(ctrl_zones[curzone].listh)
        local qh=ctrl_zones[curzone].qhandle
        bit clear sh
        bit set sh,@findelem(query qh,zr)
        if @eval("proc "+znn+"_eval(""predelete(sh,curzone)"")")
          bit for sh,"edit_del"
          @exec("proc "+znn+"_zonerefill")
          ok=FALSE
          card exit poll @handle
        endif
      endif
    endif

  otherwise
    @exec("proc "+znn+"_cardclick(@handle,@clickelementlabel)")
endcase
```

figure XII

There are a number of considerations: First of all, remembering what we did with the faking an edit click when double-clicking on a zone list entry, we must if possible re-use the delete code. In fact it is not possible in this case. Instead we do have to create a piece of code that operates functionally the same.

```
def proc medium_make(return zr,return ok)
  local curzone=medium_zonenum
  local zh,crc=-1,mt=medium,zv
  ok=FALSE
```

figure XIII

Look at it for a moment, this can happen when the zone list is not visible on screen, it's either been hidden or is an "invisible" module. Either way there's no delete button in a zone card. If you try to use a button that's not visible, well nothing happens, in this case it is a shame but there it is.

So we have to write new code. The zone list delete system uses the "selected bit string" to see which records are currently selected, offers it around to see if any other interested module wants to prevent a deletion (which they do by de-selecting the record they want to protect) and then deleting what remains.

What happens here is that (Figure XII)is that if the record is brand new (record number = -1) it means it's never been created so we can just close the window. Otherwise we ask the user if they really mean to delete this.

If they do we get the handle of the selected bitstring and the handle of the query that holds the list of records. We clear the existing selection and set the bit that corresponds to the record we want to delete. The @findelem function can be used to find which entry in an array, query or buffer contains the given value, in this case we are looking for the position of the record being deleted.

Then we issue the "predelete" message to any interested modules so they can prevent the delete if they want to. If none stop it then the record is deleted, the zone list re-filled and the card exited.

If you try creating records in a zone and then deleting them with the on-card delete you will see them disappear from the zone list. For invisible modules the zone card and zone list still exist so they can be used and modified, you just don't

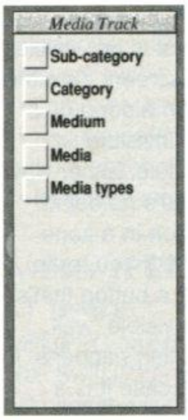


figure XIX

see them.

Implementing this as seen actually generates an error, the value of "curzone" is wrong. If you are editing a Category then decide to create or edit a sub-category then if you try to perform an on-card delete, the current zone is Category not Sub-category. Which deletes the wrong thing, or generates an error.

To compensate there is a very simple thing that can be done, and the fact that it is simple implies it is very definitely the "right" thing. At the beginning of every "_make" routine insert a line as shown in Figure 13:

```
local curzone=whatever_zonenum
```

```
def proc subcat_startup
  subcat_zonenum = proc control_register_zone("subcat","Sub-category",!VISIBLE)
  return TRUE
enddef
```

figure XV

Which automatically saves the initial zone number value and then sets the new one. It works like a charm. And that's all there is to on-card delete.

Invisible modules

```
def proc control_register_zone(zs,zt,visible)
  local zh=0,zn="",qh=0,mh=0

  ctrl_curzone+=1
  if (visible)
      ctrl_viszone+=1
      ctrl_zvis[ctrl_viszone]=ctrl_curzone
    endif

  card new zh,@tolower(zs+" zone")
  card set header zh,@trim proc toupperfirst(zt)

  zn=@trim @tolower(zs)
  ctrl_zones[ctrl_curzone].handle  = zh
  ctrl_zones[ctrl_curzone].name    = zn
  ctrl_zones[ctrl_curzone].label   = @trim proc toupperfirst(zt)
  ctrl_zones[ctrl_curzone].open    = FALSE
  ctrl_zones[ctrl_curzone].visible = visible
  ctrl_zones[ctrl_curzone].listh   = @elementhandle(zh,"list")

  query new qh,(zn+" list")
  ctrl_zones[ctrl_curzone].qhandle = qh

  menu new mh,zn,ctrl_zones[ctrl_curzone].label
  ctrl_zones[ctrl_curzone].mhandle = mh

  query new mqh,(zn+" menu")
  ctrl_zones[ctrl_curzone].mqhandle = mqh

  @exec("proc "+zn+"_zoneprep(zh,qh,mh,mqh)")

  return ctrl_curzone
enddef
```

figure XVI

As mentioned above it would be very useful to have modules which are not listed in the main control window, simply because they are not important enough (or need to be hidden from the users viewpoint). However, we still want them to be part of the control structure and allow messages to be passed between them.

```
ctrl_curzone = CTRL_ZONE_NONE
ctrl_viszone = CTRL_ZONE_NONE
ctrl_showing = FALSE
ctrl_cmenuzn = CTRL_ZONE_NONE
ctrl_cmenuzc = CTRL_ZONE_NONE
ctrl_cmenuzh = NO_HANDLE

dim i ctrl_zvis[CTRL_MAXZONES]
```

figure XVII

Figure XIV shows the Sub-category module in the control window, and we want to make it invisible. Once again this is a fairly simple procedure and the first thing to do is set up the "control_register_zone" procedure with another parameter, one called "visible". We also create a constant called VISIBLE, which has value of TRUE. Figure XV shows this in action, in this case we want subcat to NOT be visible.

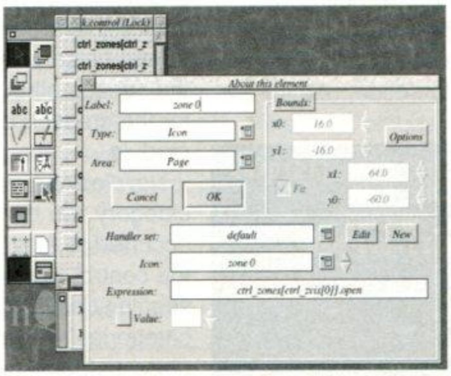


figure XVIII

Figure XVI is the new procedure with the new parameter while Figure XVII shows the new variables and array we are going to use.

It works like this, we keep ctrl_curzone as a counter of the total number of zones in use and, during the initialisation phase it is the index into the ctrl_zones[ ] array. We now add a new variable ctrl_viszone, this is the count of the number of visible zones and during initialisation the index into the new array ctrl_zvis[ ].

Every time a new module registers we add 1 to ctrl_curzone, and if this module is visible we add 1 to ctrl_viszone and put the ctrl_curzone value into the ctrl_zvis[ ] array. And that's all we need here.

The biggest bit of work is altering all the icons in the control window so that they display differently, wherever they previously contained ctrl_zones[x] they now are changed to contain ctrl_zones[ctrl_zvis[x]]. So we count through the visible modules and display the relevant information. Not appearing in a figure is the use of the ctrl_zvis variable to blank out the right number of icons so the dummy values don't appear in the control window, only the properly assigned ones.

The click handler (Figure XIX) for the control window also needs a little modification for the same reason, clearly the button displayed as "zone 3" may not actually refer to the fifth module to be registered. Only the line:

```
local zn=ctrl_zvis
[@val(@right
(e,1))]
```

```
case @clickelementlabel
  when "<close>"
    proc control_close

  otherwise
    local e=@clickelementlabel
    if @left(e,4)<>"zone" then break

    local zn=ctrl_zvis[@val(@right(e,1))]
    if (ctrl_zones[zn].open)
      proc control_close_zone(zn)
    else
      proc control_open_zone(zn)
    endif

  endcase
```

figure XIX

is changed converting the icon number into the correct module number. And finally we run the program again to find that the sub-category module no longer appears on the list.

Summary

So there we are, four modifications, one for artistic rightness and three for convenience. Next time we will look into detail how we implement the complexity of the Category/Sub-category relationship. It is definitely worth a single article to itself but it will be worth it.

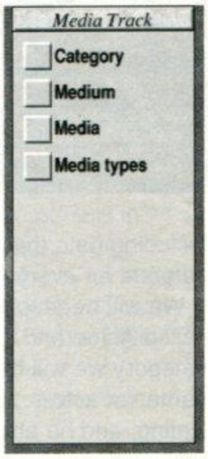


figure XX

Steve Turnbull
stevet@acornuser.com


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Lights, video, action

DIGITAL Video is the new black, or is it the new cure for all ills ... Yet among the claims there are some interesting case studies to ponder on. For instance at Wigan's Mere Oaks schools Digital Video (DV) is building communication skills and self-esteem as students, some with little speech, work towards agreement over editing points. While their sci-fi film was shot in the school's multi-sensory room and features on BECTA's digital video CD.

Taking a different approach is Southall School in Telford where DV has been used with stop-frame animation and artwork produced by autistic pupils despite or perhaps because of the detailed preparation and concentration that are required.

In mainstream education, teachers involved in the recent BECTA digital video pilot scheme have found innovative ways of using the technology to enhance teaching and learning.

In one Liverpool primary pupils devised a movie on air resistance. It begins with a white-coated, 10-year-old "scientist" announcing the subject of today's lesson to the class. The scientist lets two pieces of flat paper fall to the ground. The time they take to drop is measured, then one of the papers is scrunched up. When the two are dropped again, the scrunched paper drops faster. "Why?" asks the scientist. Recording it on video meant it could be played back frame by frame at 24 frames per second, making it easy to measure the rate, and easy to see how the papers fell.

Working from a different angle is Manor Green Primary School in Denton who have been working on their own version of Treasure Island. Using DV equipment, they have focused on scripting and artwork as well as designing pirate hats, ships and songs.

However, pupils at Fox Hill primary school in Sheffield also involved in the project have become much more critical of broadcast TV and have improved their learning by devising video to teach others.

The BECTA pilot scheme has now been evaluated by the British Film Institute to find out just how much impact the new technology could have on learning. BECTA's aim was to find out how using DV technology would affect pupils' engagement and behaviour and what teaching methods most inspired and developed pupils' work with DV.

You can see some of the success stories via the guidance CD-ROM from BECTA - free to schools - which details many of the schools' experiences as video clips and reviews all the major software available for editing video on the computer, along with straightforward "getting started" guidance and equipment advice.

One major finding of the report is that the "use of DV activities has led to an increase in pupil engagement with the curriculum". It also found that the work has led to "promoting and developing a range of learning styles". But BECTA are not claiming that this is THE solution for all classroom ills: "Just because it is innovative does not mean it's implicitly creative."

Yet the most important finding of the report is that most schools involved have learned about the overriding importance of audience. For DV to be successful finished work must be broadcast whether it's on the school Intranet, the Internet, or a big screen.

Classic colour

Epson have added a new range of hardware to their portfolio aimed at the classroom. For instance, AcuLaser C900 and C1900, colour laser printers offering black and white printing at a lower cost than many monochrome laser printers. And for Epson Stylus users, Epson recently ran a workshop with 30 children at the Design Museum creating their own unique front cover designs for Vogue Magazine with an Stylus Photo 925.

Dear Morag ...

Feel lonely? No one understands you? Then enter Morag, a new agony aunt for parents, teachers and school governors. And she works 24-7. Part of a unique online resource launched at BETT 2003 by SMSC Online, this is a new comprehensive website which supports the integration of Spiritual, Moral, Social and Cultural values across the whole school curriculum.

You are able to track resources, share ideas, read articles among other things. Then there are specific sections for schools, governors and parents. Find out more at **www.smsc.org.uk**

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Stateside

THE New York Virtual Charter School is an Internet-based school accessed from all over the US and run by former U.S. Education Secretary William Bennett. The idea is of a tuition-free school providing students with home computers and teachers online or at the proposed facility in the Syracuse suburb of Fayetteville.

However, while state officials agreed that it be a preferred option for students living in isolated or dangerous neighbourhoods, bullied students or even students with unconventional schedules (because they are Olympic hopefuls for instance) hopes and plans were dashed when it was announced that the state charter law doesn't allow for an Internet-based education from home computers.

A provision of the law requires the charter school to be in one building, while the Virtual Charter School would allow students to be educated from their homes or in small clusters statewide. "This is exactly the sort of option New York families need," said SUNY Trustee Candace DeRussy. "It's high time New York moved into the 21st century ... I believe it's irresponsible of us to deny New York families this option."

But there was not complete support for the school. The League of Women Voters of New York State said the charter school should be rejected as it couldn't meet the needs of certain at-risk populations, and would lead to re-segregation of education. This is not the end of the fight, so watch this space!

SOS (Save Our Sundays)

Other resources

ed-u.com

www.ed-u.com/

A huge education portal, describing itself as the Transatlantic Education resource, this site features news, advice for teachers, employment information, special reports and an enormous amount besides. The size of the site can be overwhelming, but it remains well-ordered and easy to navigate.

Religious Education Exchange Service

http://re-xs.ucsm.ac.uk/

These pages contain lesson plans and worksheets contributed by teachers of RE across the land. Lesson plans are roughly grouped by topic and each indicates the Key Stage and the religions covered.

Music at school

www.musicatschool.co.uk

Aimed at Key Stages 3 to 5, it contains well thought-out lesson plans, worksheets, suggestions and quizzes.

Roald Dahl

www.roalddahl.com

Great literacy ideas in the teachers section and the opportunity to post reviews online, plus some enthralling Quentin Blake animations, make this a wonderful tool for primary teachers.

TeachersNet

http://teachers.net/lessons/

Share your most precious asset, teaching ideas and lesson plans. Post lesson plans and curriculum development ideas or simply add a few words or ideas to the Lesson Bank. Alternatively, you can use the search engine to access lesson plans from pre-school to secondary level. You can find lessons ideas from art to geography and games. Some great ideas in here for after school club activities too.

The Virtual Teachers Centre (VTC)

http://vtc.ngfl.gov.uk

A good search engine is the key element here with the ability to search for on a pretty complete range of topics, ages from Reception to Year 13 as well as specify your reason for searching, subject coordination, teaching to technician. What you get is advice, plans and help.

Hamilton Trust

www.hamilton-trust.org.uk

Hamilton Trust is an educational charity which aims to support primary teachers in raising pupil achievement, and to reduce teacher workload. Adaptable weekly plans and educational projects are based on work with local schools. Recently re-designed the site is easier to use and they have more than doubled the number of resources.

I first came across this site via their free adaptable plans for Maths and English for all teachers in Reception through to Year 6. Handy it you're snowed under, fancy a week away or are on supply. And Maths and English is all that you'll find here.

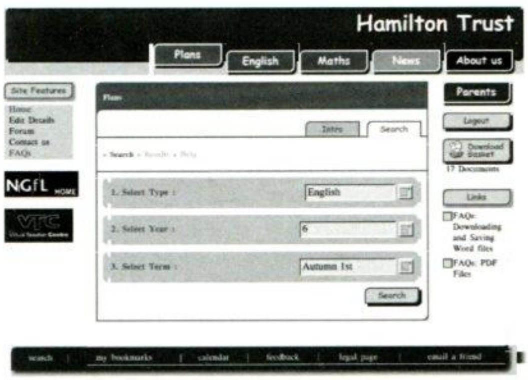
Just as good are the medium term and weekly plans available now for Spring 2003. The idea being that you can use other people's ideas so you don't feel alone or feel the need to re-invent the wheel. As it says in the official DfES Guidance (signed by OFSTED and QCA) downloading plans can save yourself hours of time.

There are no bells and whistles here just a plain and useful site, the idea being to save you time not spend it! Tabs along the top read: Plans, English, Maths, News, About us, Parents, Login, Download Basket and Links. There are also linking buttons to NGFL and VTC. There are help sections on each page and in every coloured bar. These offer support with everything from downloading to delivering a lesson on adverbs.

So let's look at each tabbed section in turn starting with **Plans**. You have to register but there is no cost and the process is painless and it means that when new plans are added you are notified by a friendly e-mail. What this means is that at the end of the one term you have the first half term of the next term and so on.

Accompanying the plans are pupil resources, many of which are professionally illustrated and downloadable as MS Word and PDF documents. While for English each half-term comes with a booklist. Then there are oral stories and rhymes often specially written and chosen to add a level of work guaranteed to teach and stimulate the higher level writing skills.

Take a look at Animated Tales which involves an on-screen picture book with in-built vocabulary activities and topic links. These are freely downloadable (without sound) or may be purchased



at cost with sound. For Reception and Years 1 and 2 there are phonics resources in the form of Code-Breakers, a structured programme of short daily sessions.

Maths plans are closely matched to the National Numeracy Strategy (NNS) Framework, and highlight the objectives covered in the main part of the lesson and also in the mental-oral starter. This area is not as well developed as the



English side but Hamilton Trust are working on this.

Again there are medium and weekly plans. Set A adapt the medium term outline provided in the Framework to fit the week-schedule of the term, and also to allow for a careful and structured progression of teaching objectives. Then there is Set B plans which is a new set of plans, currently only available in Year 1 and Year 2, but hopefully to be extended.

These contain a higher percentage of

problem-solving and more open-ended activities. But remember these plans are produced for a generic class so that even though they save you time you'll still have to change them to make them fit your specific class.

Each weekly plan outlines the strategies, models and practical resources required to teach that week's content. It also describes the pupil resources needed. A mental-oral starter is suggested along with a main teaching activity, a summary of the key points and a plenary. The mental-oral starter will sometimes practise a pre-requisite skill required for the main teaching activity.

On other occasions it will rehearse a set of skills unrelated to this, but which need to be kept fresh in the mind. The format follows what you'd expect of the NNS and pupil activities are provided at three levels of attainment. One of these group activities will require a teacher presence, and therefore the other two activities will, hopefully, be such that the children can work independently. Where an adult presence is definitely required, this is highlighted.

The plans are referenced to the commercial Abacus resources from Ginn which is great if you use these in school, if not the plans are still usable as the Abacus Teacher Cards, containing the teaching strategies and an alternative activity for the plenary session are downloadable FREE as PDF files from the Ginn site found via the link on the link on the Maths Plan page.

I particularly like the fact that there is a phone and an e-mail contact if you have any queries. Plans are adaptable and provide medium term and weekly plans but only for English and Maths and only for Primary, Reception to Year 6. A search tab within the plans section allows you to specify the year and term you are interested in.

When it comes to medium term planning there is a detailed overview of the half term. Viewing these will let you see which books are used for instance and look at all the resources required and see whether you need to prepare your class by reading a longer story or chapter in advance. I particularly liked the English plans as you are offered two sets so offering a choice of text and topics and there are two sets of maths plans for Year 1 and Year 2 offering a choice of approach. There is some help too for teachers with mixed aged classes, with Maths lessons for Years 1/2, 3/4 and 5/6 for Autumn and Spring terms.

The plans are matched closely to the National Literacy Strategy (NLS) but also incorporate a measure of oral work (speaking and listening) derived from the National Curriculum in English. This includes discussion, debate, role-play and dramatic activity, all incorporated within an NLS, objective-led structure.

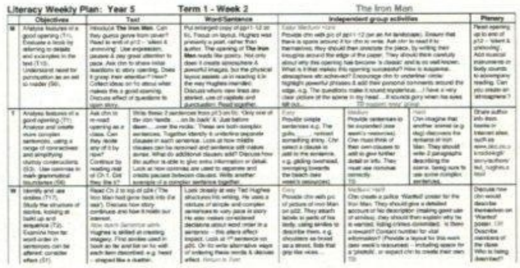
Having searched and found your plans, you need to download them. You can click on a specific the basket icon or select the whole half-term. This means that you can't see them without downloading which isn't really a serious problem. But downloading a half-term could be time-consuming so using the Download Basket means that all selected files are zipped to you in one package. This assumes you are using a PC with WinZip but RISC OS users can download individual items too by right-clicking on the name (not the icons) of what you want. This provides a Word document which of course can be loaded straight into TechWriter quickly and efficiently. Depending on the software you've got you should be able to unzip a WinZip file as well.

The plans are detailed, clear and very usable. You only get five weeks a half-term though so this doesn't mean that you'll never plan again. As you work your way through the searching process the links subheading changes holding different FAQs to help.

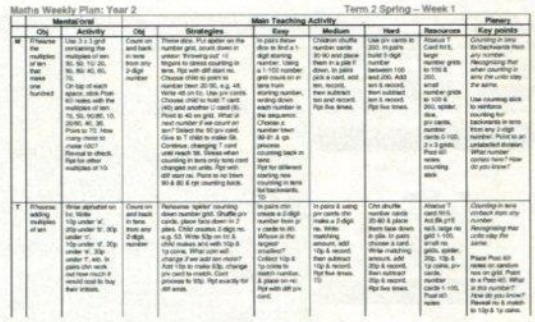
In addition to the plans Hamilton Trust have resources and projects you might want to take advantage of. Starting with the **English** section of the site contains a variety of pupil and teacher resources for use both within and outside the Literacy Hour. These are all FREE to download.

The Hamilton Reading Project was started in 1997, working with a dozen local schools and predating the NLS but taking a similar approach and breaking down into five initiatives: Code-Breakers is a phonics programme consisting of a structured programme of short daily sessions and incorporates an element of role-play and writing for a purpose.

Next is Individual Reading with a skills-sequence categorised under both technical/decoding skills and comprehension skills. Or how about Rhyme and Ritual which addresses higher level reading and writing skills Êfocussed around a series of themes. Then Text-based Teaching is a scheme of work, structured under the NLS headings of



Text, Sentence and Word, focussed around particularly good or inspiring texts. Many of these ideas have now been used in the Hamilton Plans but the schemes of work themselves can all be downloaded for free. Finally, Animated Tales addressed higher level reading and writing skills by combining picture book art with small lively detailed animation. There is less of interested in the **Maths** section.



However, when it comes to Maths and English the Hamilton Trust's pedigree is very impressive and they are adding to the site all the time. They also have plans for a parent's page of resources to share with children or as background information and reading. In the meantime ideas for parents based about Marcus Pfister's book The Rainbow Fish as well as the Bear oral story, rhymes and poems and animated tales.

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Licence to do nothing

I am confused. I understand that Castle have launched the Iyonix, but I have read rumours on the Internet that they don't really have a licence for the 32-bit version of RISC OS. Can you please explain what's going on?

Raymond Chan
by e-mail

We have heard these rumours as well, the Internet is great for rumours but ranks fairly low for real fact. Our first reaction was "ridiculous", and you don't actually have to think your way through any level of nitty-gritty to figure this one through:

Castle Technology Ltd are a successful computer company. They manufacture and sell RISC OS-based computers, they supply products and services related to those products. They have been doing this successfully for many years.

Jack Lillingston, who runs Castle Technology, is a businessman. He is a successful businessman.

You have to ask yourself this very simple question: Would a successful businessman, who has been running a successful business for many years, spend a whole wodge of money launching a new computer when, at any second, someone could stand up and sue?

Would he jeopardise his livelihood and potentially his liberty for such an obvious thing as a lack of a licence?

Only an extremely stupid person, in fact someone stupid enough to be capable of making that exact error, could possibly accuse another person of that particularly stupid crime.

Time has demonstrated that Jack Lillingston is far from stupid; stupid people do not build and run successful companies. So you can figure this through yourself and see just how obviously false that rumour must be.

Then you can think about why anybody would start such a rumour. It cannot be anything but malicious. And anyone who perpetuates such a rumour is either very stupid or equally malicious. Or both. Nor do they actually give a damn about the RISC OS market.

As it happens we did ask Jack if he had any comment about the rumour. His immediate response was one of annoyance, and who can blame him? He has spent a very large sum of money bringing a new product to a stagnating market and, let's not beat about the bush, this must have been an extremely expensive activity.

He has done this and he has been attacked for it, and that's enough to make anyone annoyed. Anyway his response to the question was this: "We have the necessary and proper licences for every part of this product that requires a licence."

We asked if he would elaborate, he declined to go into more detail as to the nature of the licences saying only "we have NDAs (non-disclosure agreements) with our partners just as third parties have NDAs with us. We are not going to break those agreements."

You can just see the sneaky malicious types now: "Oh so he wouldn't say anything eh? That proves he hasn't really got a licence." And they go sneaking off Gollum-like.

But consider this also: These very few people (and believe me there are only a very few who are originating this vicious attack, probably less than five) if they really believed they were right, wouldn't they come out in the open? Stand up on their hindlegs and demand the law be brought down on the evil-doer that is Castle Technology?

They don't simply because they know the obvious truth as well, Castle does have the licences it needs to sell this computer. The mere fact that they lurk, causing trouble in an underhand way, trying to stop people buying the Iyonix for fear of breaking the law, demonstrates conclusively that they know that they are lying.

People always accuse others of what they themselves are guilty of.

So the final point is this: Castle have the licence for RISC OS 5 and everything else that needs a licence.

(Oh, and by the way, if you are reading this and thinking "How dare you accuse me!" Well, if the cap fits...)


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